

# STIP Project R-5763

## WBS No.: 44638.1.1

ADMINISTRATIVE ACTION

Combined Environmental Assessment and  
Finding of No Significant Impacts

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

Submitted pursuant to the North Carolina Environmental Policy Act



APPROVED:

12/16/2021

Date

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Division Engineer  
NCDOT Division 14

Improvements to Wilson Road

STIP Project R-5763

WBS No.: 44638.1.1

Proposed Improvements to SR 1540 (Wilson Road)  
From US 276 (Greenville Highway) to SR 1504 (Old US 64/Old Hendersonville Highway)

Transylvania County

ADMINISTRATIVE ACTION

STATE ENVIRONMENTAL ASSESSMENT and FINDING OF NO SIGNIFICANT IMPACT

December 2021

Documentation prepared for NCDOT Highway Division 14:

12/16/2021  

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## **PROJECT COMMITMENTS**

### **Improvements to Wilson Road (SR 1540)**

**From US 276 (Greenville Highway) to SR 1504 (Old US 64/Old Hendersonville Highway)**

**Transylvania County**

**TIP Number: R-5763**

**WBS: 44638.1.1**

## **COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN**

### **Project Management – Elizur Patton House**

Tree protection measures will be shown on design and erosion control plans for the large tree in the southwest corner of the property.

### **Project Management – Mary and Albert Jenkins House**

NCDOT will contact the property owner and seek their consent to providing an improved access from Three Mile Knob Road and ask if they want landscape screening installed along the edges of the proposed rip rap. If so desired, NCDOT will improve the current driveway off Three Mile Knob Road, install the screening, and guarantee the plants' survival for two years.

### **Division Construction– Elizur Patton House**

Tree protection measures will be installed before and maintained during construction at the southwest corner of the property.

### **Division Environmental Staff/Project Management – Trout Moratorium**

NCDOT will evaluate the need for a trout buffer variance during final design. Plans showing the trout buffer encroachment areas will be prepared for this determination.

### **Project Management/Division Environmental Staff – Additional Tribal Coordination**

Any additional tribal coordination will be coordinated in consultation with the US Army Corps of Engineers.

### **Project Management/Environmental Staff – Section 7**

Additional project commitments are anticipated following rendering of the Section 7 Biological Opinion and will be included in the construction document consultation. These are currently anticipated to include, but may not be limited to, the following:

1. Additional small whorled pogonia, bat, and Virginia spiraea surveys will be conducted in areas to be impacted by the project (based on plans) before construction.
2. Contribution to the aquatic non-game conservation fund will be provided in the amount of \$50,000.

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# 1. PROPOSED PROJECT

## 1.1 Description of Existing Conditions

Wilson Road (SR 1540) is located east of the City of Brevard and, in conjunction with Ecusta Road (SR 1512), serves as a bypass around the City; connecting US 276 (Greenville Highway) to US 64 northeast of the City. Wilson Road is a 3.6-mile long two-lane facility connecting US 276 and Old US 64/ Old Hendersonville Highway (SR 1504) (Figure 1). There are several roads that intersect Wilson Road including: Crestview Drive, Long Branch Road, Three Mile Knob Road, Knob Creek Road, Elm Bend Road, Williamson Creek Road, Valley Overlook Drive, Middle Mount Road, and Glen Cannon Drive. Elm Bend Road is the only road intersecting Wilson Road from the west; all other roads intersect Wilson Road on the eastern side and predominantly provide access to subdivisions or clusters of homes. The existing facility has no control of access. There are approximately 43 residential driveways and 18 business entrances along Wilson Road.

The federal functional roadway classification of Wilson Road, as well as Old US 64/ Old Hendersonville Highway, Ecusta Road, and Elm Bend Road is 'minor arterial'. US 276 is classified as 'other principal arterial'. The Land of Sky Regional Planning Organization (RPO) classifies Wilson Road as a 'minor thoroughfare' in its Comprehensive Transportation Plan Draft Working Map (2021). Wilson Road is also included as part of each of six bicycle routes and Transylvania County designated Old US 64/ Old Hendersonville Highway as Bicycle Route 1.

The study area encompasses approximately 200 feet on either side of the centerline of Wilson Road. It extends approximately 250 additional feet to the east of the existing centerline as it approaches Old US 64/ Old Hendersonville Highway, to include the Ecusta Road intersection. Where the French Broad River is close to the road and is within the study area boundary, the study area stops at the French Broad River. The study area is approximately 189 acres.

## 1.2 Traffic Conditions

The Traffic Forecast Technical Memorandum (HNTB, 2018) and the Traffic Analysis Technical Memorandum (HNTB, 2018) analyzed the traffic patterns along the project corridor. The traffic forecast study area for this project is Wilson Road from US 276 to Old US 64/ Old Hendersonville Highway. It also includes Old US 64/ Old Hendersonville Highway from just west of its intersection with Wilson Road to just east of Ecusta Road (SR 1512). As shown in Table 1, the Average Annual Daily Traffic (AADT) along Wilson Road from US 276 to north of Old US 64/ Old Hendersonville Highway ranges from 2,500 to 4,000 vehicles per day (vpd). The AADT is expected to increase on Wilson Road in the future year (2040) by approximately 500 vpd from US 276 to Old US 64/ Old Hendersonville Highway. Because the proposed build alternative does not increase the capacity of the facility, it is not anticipated that there will be a difference between Build and No-Build traffic volumes.

**Table 1. Annual Average Daily Traffic for Base and Future Year**

Location	2017 No Build AADT (vpd)	2040 No Build AADT (vpd)	2040 Build AADT (vpd)
Wilson Road (SR 1540) – US 276 (Greenville Highway) to Elm Bend Road (SR 1543)	2,500	3,300	3,300

Table 1. Annual Average Daily Traffic for Base and Future Year

Location	2017 No Build AADT (vpd)	2040 No Build AADT (vpd)	2040 Build AADT (vpd)
Wilson Road (SR 1540) – Elm Bend Road (SR 1543) to Williamson Creek Road (SR 1541)	3,900	5,200	5,200
Wilson Road (SR 1540) – Williamson Creek Road (SR 1541) to Glen Cannon Drive (SR 1580)	3,800	5,000	5,000
Wilson Road (SR 1540) – Glen Cannon Drive (SR 1580) to Old Hendersonville Highway (SR 1504)	4,000	5,300	5,300
US 276 (Greenville Highway) – South of Wilson Road (SR 1540)	6,600	9,000	9,000
US 276 (Greenville Highway) – North of Wilson Road (SR 1540)	5,700	7,700	7,700
Elm Bend Road (SR 1543) – West of Wilson Road (SR 1540)	2,400	3,100	3,100
Williamson Creek Road (SR 1541) – East of Wilson Road (SR 1540)	1,900	2,400	2,400
Glen Cannon Drive (SR 1580) – South of Wilson Road (SR 1540)	1,200	1,500	1,500
Old Hendersonville Highway (SR 1504) – West of Wilson Road (SR 1540)	8,000	9,600	9,600
Old Hendersonville Highway (SR 1504) – Wilson Road (SR 1540) to Ecusta Road (SR 1512)	11,200	13,900	13,900
Old Hendersonville Highway (SR 1504) – East of Ecusta Road (SR 1512)	7,900	9,700	9,700
Ecusta Road (SR 1512) – North of Old Hendersonville Highway (SR 1504)	7,100	9,400	9,400

Source: HNTB Traffic Analysis Technical Memorandum, July 2018.

The capacity analysis presented in the Traffic Analysis Technical Memorandum evaluated the level of service (LOS) in the base year No-Build and future year No-Build and Build scenarios. The 2016 Highway Capacity Manual Six (HCM 6) characterizes LOS by letter designations A through F. LOS A represents ideal low-volume traffic operations, and LOS F represents congested, high-volume traffic operations. LOS for intersections is determined by average control delay per vehicle. Signalized intersection LOS overall designations of A through D are considered acceptable, even if an individual movement or approach exhibits a LOS of E or F. As noted in the Traffic Forecast, additional consideration was given to intersection approach LOS and maximum queue estimates, as these results may indicate potential congestion and operational issues that may affect traffic flow.

Table 2 provides the overall traffic capacity results generated in the Synchro analysis software application for study area intersections. All results were generated using Synchro Version 9 for consistency.

Table 2. Synchro Intersection LOS Results

Intersection	Peak Hour	2017 No Build LOS	2040 No Build LOS	2040 Build LOS
Wilson Road at US 276	AM	B	C	C
	PM	B	C	C
Wilson Road at Elm Bend Road	AM	B	B	B
	PM	A	B	B
Wilson Road at Williamson Creek Road	AM	B	B	B
	PM	B	B	B
Wilson Road at Glen Cannon Drive	AM	B	B	B
	PM	B	B	B
Wilson Road at Old US 64/Old Hendersonville Highway	AM	C	D	<b>C*</b>
	PM	C	D	<b>C*</b>
Wilson Road at Ecusta Road	AM	<b>B</b>	<b>B</b>	<b>C*</b>
	PM	<b>B</b>	<b>C</b>	<b>C*</b>

Source: Traffic Analysis Technical Memorandum (HNTB, 2018).

**BOLD** text denotes a signalized intersection.

For unsignalized intersections, the LOS shown is for the worst-case critical movement scenario.

\*Note: Wilson Road is realigned to Ecusta Road at Old US 64/Old Hendersonville Highway in Build Scenario.

Based on the traffic capacity analysis results, the 2040 Future Year Build scenario provides adequate traffic capacity to accommodate the 2040 Future Year Build traffic volumes at all intersections within the study area. With the proposed design, all the study area's unsignalized and signalized intersections are projected to operate at LOS C, or better, during peak hours in the 2040 Build scenario.

### 1.3 Crash Data

As part of the Traffic Analysis Technical Memorandum (2018), an analysis of existing crash patterns and rates along the corridor was completed. A total of 59 crashes were reported for the 5-year period between May 1, 2013 and April 30, 2018, as shown in **Table 3**. The crash data available for the project corridor were compared against the North Carolina statewide crash rate for the same approximate time period (2015 through 2017). The crash rate for Wilson Road is higher than the statewide crash rate for similar facilities in total crashes, non-fatal injury crashes, and wet crashes. In this 3.7-mile corridor, crash types were primarily fixed object crashes (25 crashes, approximately 51 percent), left-turn different roadway crashes (7 crashes, approximately 12 percent), and overturn/rollover crashes (6 crashes, approximately 10 percent). There were no fatal crashes identified and one severe injury crash (Class A) was reported. No crashes involving pedestrians were reported and one crash involving a bicyclist was recorded.

Table 3. Study Area Crash Rate Comparison

Crash Type	Total Crashes	Crash Rate <sup>1</sup>	Statewide Crash Rate <sup>1</sup>	Critical Crash Rate <sup>2</sup>
Total <sup>3</sup>	59	<b>292.28</b>	237.10	295.95
Fatal	0	0.00	2.48	10.72
Non-Fatal (Injury)	15	<b>74.31</b>	69.34	102.30
Night	12	59.45	100.16	139.28
Wet	13	<b>64.40</b>	39.01	64.35

<sup>1</sup> 2015-2017 Statewide crash rates in crashes per 100 million vehicle miles for two-lane undivided rural secondary routes in North Carolina.

<sup>2</sup> Based on the statewide crash rate (95% confidence interval).

<sup>3</sup> Crash types are not mutually exclusive to each other and therefore the total is not the sum of the crash types, but of the crashes within the 5-year period.

In addition to the crash comparison for the Wilson Road corridor, individual intersection crash data for the designated 5-year period were also analyzed. These intersection crashes were recorded for all intersection approaches within 150 feet of the intersections. The intersection of Old US 64/ Old Hendersonville Highway at Wilson Road had the highest total number of crashes (14) and the highest crash rate (51.05). Crash types at this intersection were primarily angle crashes (8) and rear-end crashes (4). There were no fatal or severe injury crashes (Class A) at this intersection. Zero crashes involving pedestrians and one crash involving bicyclists occurred during this time period. Crash types at the intersection of Old US 64/ Old Hendersonville Highway at Ecusta Road were primarily angle crashes (4) and rear-end crashes (4). There were zero (0) fatal or severe injury crashes (Class A) at this intersection. No crashes involving pedestrians or bicyclists occurred during this time period.

## 1.4 Transportation Plans

The northern end of Wilson Road, from the City of Brevard Wastewater Treatment Plant (WWTP) to Old US 64/ Old Hendersonville Highway, is within the municipal limits of the City. The land to the west of Wilson Road is within the City of Brevard's extraterritorial jurisdiction. East of Wilson Road is considered Transylvania County jurisdiction. This section includes plans developed by the City, County, and State to address transportation needs.

The *Comprehensive Transportation Plan Study Report for Transylvania County* (CTP) was adopted by Transylvania County in 2007. It was endorsed by the Land of Sky RPO, which supports regional planning process and includes the City of Brevard, Towns of Hot Springs, Marshall and Rosman, and the non-urbanized areas of Buncombe, Haywood, Madison, and Transylvania Counties in their planning efforts. The CTP recommends improving the offset intersection of Ecusta Road (SR 1512) and Old Hendersonville Road (SR 1504) and Wilson Road (SR 1540) and Old Hendersonville Road to form a four-way intersection. This four-way intersection would remove the unnecessary turn movements for north-south traffic. This improvement was also designed to relieve the spot congestion on the section of Old Hendersonville Road between Ecusta and Wilson Roads.

The *Transylvania County Bicycle Plan* was adopted in 2019 and includes the proposed improvements to Wilson Road as critical to improving bicycle infrastructure and connectivity in Transylvania County. Wilson Road is included as part of a wider bicycle network in connecting neighborhoods and schools to recreational areas such as Hap Simpson Park and eventually Cedar Mountain and DuPont State Recreational Forest. Improvements to Wilson Road are considered a priority project within the Plan.

The 2020-2029 NCDOT State Transportation Improvement Program (STIP) includes project R-5763 as a State-funded project for anticipated right of way and construction in 2021 and 2023, respectively.

## 1.5 Section 404/NEPA Merger Process

The Feasibility Study (2017) for the subject project noted several conflicting resources within the project study area. These resources include waters of the US, endangered species, and historic resources. The Merger Screening Packet (June 2018) detailed the information and potential impacts from the Feasibility Study concept chosen to move forward (see Section 3.1). In September 2018, the US Army Corps of Engineers (USACE) recommended the Merger Process for the project due to the high number of impacts, competing resources, and the potential for residential relocations and environmental justice impacts.

## 2. PURPOSE AND NEED

### 2.1 Need for Project

#### Flooding

Wilson Road is located within the 50-year floodplain of the French Broad River. Consequently, sections of Wilson Road flood during 10-year and 50-year storm events, making the road impassable to residents, those traveling to or from businesses, and to the WWTP. The WWTP is located near the northern terminus of the project at 3226 Wilson Road, Pisgah Forest. The NCDOT-Division 14 County Maintenance Engineer noted that the road is flooded, particularly at the northern terminus (Exhibit 1), four to five times per year. In addition, the French Broad River is beginning to undercut the roadway in areas that are immediately adjacent to the river (Exhibit 2).



**Exhibit 1.** Wilson Road closure at the bridge abutment (facing south) due to flooding December 2018 (NCDOT).



**Exhibit 2.** Wilson Road, between US 276 and Elm Bend Road, collapses after heavy rains May 2018 (*Transylvania Times*).

The Transylvania Transportation Advisory Committee identified other concerns and interests in its January 26, 2016 committee meeting, including: the need for guard rails where Wilson Road is adjacent to the river; raising and extending the bridge over the French Broad River out of the floodplain; increasing the travel lane width; straightening or realigning curves; providing paved bike lanes and shoulders; and improving the intersection of Wilson Road at US 276 and realigning Wilson Road at Ecusta Road.

### Roadway Design and Safety

The existing alignment of Wilson Road does not meet existing design standards. The vertical and horizontal alignment deficiencies contribute to the crash rate discussed in Section 1.3. The crash rate for the five-year period from May 1, 2013 to April 30, 2018 exceeds the average statewide crash rate for similar roads.

## 2.2 Purpose of the Project

The purpose of this project is to bring the roadway out of the 2 percent annual chance (50-year) flood zone of the French Broad River and address facility deficiencies throughout the corridor, bringing the road up to minimum design standards.

On February 13, 2019, the Merger Team concurred with the Need, Purpose and Study Area of the project (Appendix A).

## 3. ALTERNATIVES ANALYSIS

This analysis considers two detailed project alternatives: a No-Build Alternative, in which only routine maintenance activities are anticipated through the project area and a Build Alternative, which would upgrade Wilson Road to current Major Collector design standards, move the roadway out of the 50-year floodplain associated with the French Broad River, and re-align the intersection with Old US 64/ Old Hendersonville Highway to a roundabout with Ecusta Road.

### 3.1 Alternatives Considered but Eliminated

The Feasibility Study (2017) analyzed three possible concepts for the subject project. The first concept proposed making minor upgrades and improvements using NCDOT's Resurfacing, Restoration, and Rehabilitation (3R) guidelines. Under this concept the roadway would remain in the 50-year floodplain and not meet the purpose and need of the project.

The third concept proposed to upgrade Wilson Road to principal arterial (US Route) design standards. This concept would put Wilson Road on new location over the mountain. This concept had high impacts to the human and natural environment, most notably the relocation of 53 residences. In addition, this concept met with extremely high opposition from the public and local officials during the public meeting held in September 2016. Furthermore, the cost of this concept was estimated at \$102.6M, more than three times the other concepts.

The second concept was to improve Wilson Road to current design standards and move it out of the 50-year floodplain. This concept was moved forward as Build Alternative 1.

### 3.2 No-Build Alternative

The No-Build Alternative is the baseline comparison alternative for the design year (2040). The No-Build Alternative would not provide any improvements to the roadway except what is generally needed to maintain the road. The No-Build Alternative does not meet the purpose and need of the project but was carried forward to allow for comparisons to the Build Alternatives.

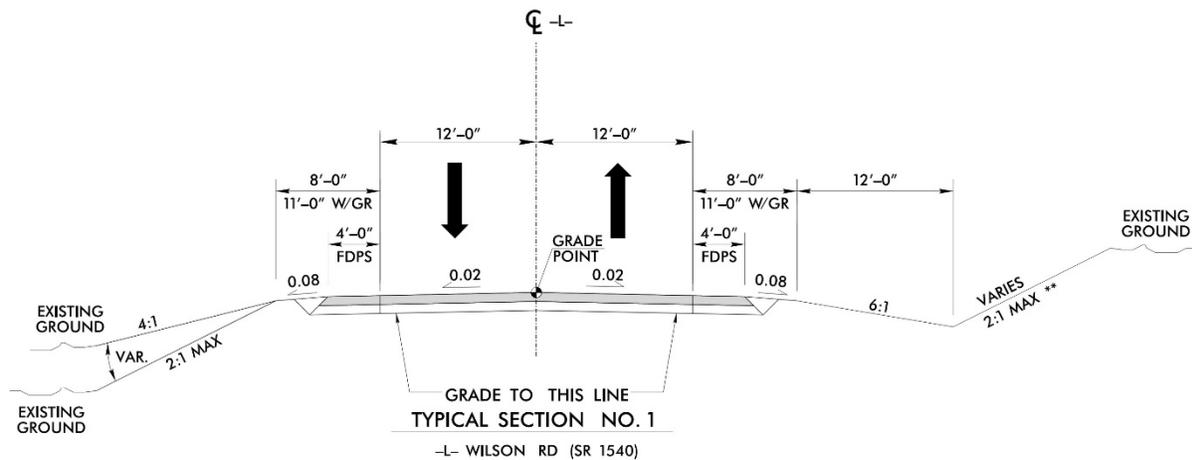
### 3.3 Build Alternative

Under Build Alternative 1, two options were considered for the northern terminus of the project: maintaining the current alignment or realigning to connect Wilson Road and Ecusta Road. The Merger Team concurred on March 20, 2019, to advance the alternative that realigns Wilson Road on new location to intersect with Ecusta Road. The realignment would have fewer impacts and meet the Land of Sky RPO's previously stated goal of realigning Wilson Road with Ecusta Road, as well as reducing crashes and improving overall mobility.

Under the Build Alternative, existing Wilson Road will be raised to prevent overtopping during a 50-year storm event. The horizontal deficiency of the roadway will be improved by flattening many of the curves in the road. To do this, Wilson Road will be shifted onto new alignment in some locations. The most notable lengths of new alignment begin approximately 0.25 mile north of US 276 to 0.1 mile south of Three Mile Knob Road (approximately 0.6 mile); from Elm Bend Road to 0.6 mile south of Middle Mount Road (approximately 0.8 mile); from 0.1 mile north of Middle Mount Road to just north of the utility easement (approximately 1.0 mile); and from the WWTP across the French Broad River to intersect with Ecusta Road (approximately 0.4 mile).

As shown in Exhibit 3, the proposed typical section for Wilson Road will remain two lanes. However, the lane width will increase to 12 feet from 9 feet and 8-foot shoulders (4-foot paved and 4-foot unpaved) will be added on both sides of the facility.

## Exhibit 3.



The bridges over Williamson Creek and over the French Broad River will be replaced on new alignment. The bridge over Williamson Creek will increase from 75 feet to approximately 270 feet in length. The bridge over the French Broad River will increase from the existing 181 feet in length to approximately 1,145 feet. The changes in bridge length were required to avoid producing a rise to the floodplain elevation. Neither bridge will have bents in the water.

### 3.4 Preferred Alternative

The Build Alternative meets the purpose and need by improving the horizontal and vertical alignment of Wilson Road to meet current design standards and prevent overtopping during the 50-year storm event. Flattening of the curves and realignment of the road with Ecusta Road should reduce the number of crashes. The Build Alternative is the Preferred Alternative. On July 16, 2020 the Merger Team concurred that the Build Alternative is the Least Environmentally Damaging Practicable Alternative (LEDPA).

## 4. ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION

This section details the existing environment within the study area and the direct impacts based on slope stake limits plus a 25-foot buffer, based on current designs. This section also discusses the anticipated indirect and cumulative impacts of the proposed project. Avoidance and minimization opportunities have been documented throughout the life of the project and will continue to be pursued, to the maximum extent practicable, for all known impacts through final design. Resources are shown in Figures 2A through 2I.

### 4.1 Natural Environment

Resource information pertaining to the natural environment was gathered and reviewed in the Natural Resources Technical Report (NRTR) (Three Oaks Engineering, 2018) for this project. Field work was conducted in January, June, and July 2018. The findings are summarized in the following sections.

#### Topography

The study area is located within the Blue Ridge Mountains physiographic province of North Carolina. Topography in the project vicinity ranges from the relatively flat area associated with the floodplain of the

French Broad River, rising sharply to mountainous areas with steep slopes. Elevations within the study area range from approximately 2,000 feet to 2,200 feet above mean sea level.

#### Impact

This project will require both fill and cut slopes to improve the horizontal and vertical alignments of the road and move it out of the 50-year floodplain. Based on the current design slope stake limits, there are approximately 188,000 cubic yards of cut and approximately 300,000 cubic yards of fill associated with the project.

### Floodplains

Within the study area there are approximately 88.5 acres within the 100-year floodplain and 18.3 acres within the 500-year floodplain.

#### Impact

Using slope stake limits plus 25 feet, this project may impact up to 36.4 acres of the 100-year floodplain and up to 9.2 acres of the 500-year floodplain. This project will create an unavoidable rise in the 100-year floodplain due to the encroachment of Wilson Road in some locations. The NCDOT Hydraulics Unit will coordinate with the NC Floodplain Mapping Program to determine the status of the project with regards to the applicability of NCDOT's Memorandum of Agreement and/or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR). Additionally, since the project will involve construction activities on or adjacent to FEMA-regulated streams, the Division shall submit sealed as-built construction plans to the NCDOT Hydraulics Unit upon completion of project construction, certifying that the drainage structures and roadway embankments that are located within 100-year floodplains were built as shown in the construction plans, both horizontally and vertically.

### Soils

There are twenty soil types within the study area as shown in Table 4.

**Table 4. Soils in the Study Area**

Soil Series	Map Unit Symbol	Drainage Class	Hydric Status
Ashe-Edneyville complex, 15 to 30 percent slopes, rocky	AnE	Somewhat excessively drained	Nonhydric
Ashe-Edneyville complex, 30 to 50 percent slopes, very rocky	AnF	Somewhat excessively drained	Nonhydric
Augusta fine sandy loam, cool variant, 1 to 4 percent slopes, rarely flooded	AuA	Moderately well drained	Hydric
Unaka-Porters complex, 50 to 95 percent slopes, very rocky	BrG	Well drained	Nonhydric
Braddock loam, 2 to 8 percent slopes	BvB	Well drained	Nonhydric
Evard loam, 15 to 30 percent slopes, stony	ChE	Well drained	Nonhydric
Evard loam, 30 to 50 percent slopes, stony	ChF	Well drained	Nonhydric

Table 4. Soils in the Study Area

Soil Series	Map Unit Symbol	Drainage Class	Hydric Status
Dillard loam, 1 to 5 percent slopes, rarely flooded	DeB	Moderately well drained	Hydric
Hayesville loam, 15 to 30 percent slopes	HaE	Well drained	Nonhydric
Hayesville loam, 30 to 50 percent slopes	HaF	Well drained	Nonhydric
Rosman fine sandy loam, 0 to 2 percent slopes, frequently flooded	Ro	Well drained	Hydric
Dellwood-Reddies complex, 0 to 5 percent slopes, occasionally flooded	Rs	Moderately well drained	Hydric
Biltmore sand, 0 to 3 percent slopes, frequently flooded	Su	Well drained	Hydric
Tate fine sandy loam, 2 to 8 percent slopes	TeB	Well drained	Nonhydric
Tate fine sandy loam, 8 to 15 percent slopes	TeD	Well drained	Nonhydric
Toxaway loam, 0 to 2 percent slopes, frequently flooded	Tn	Very poorly drained	Hydric
Cullowhee-Ela complex, 0 to 3 percent slopes, occasionally flooded	To	Somewhat poorly drained	Hydric
Saunook loam, 8 to 15 percent slopes	TsD	Well drained	Nonhydric
Saunook loam, 15 to 30 percent slopes, stony	TsE	Well drained	Nonhydric
Toecane-Tusquitee complex, 15 to 30 percent slopes, very bouldery	TuE	Well drained	Nonhydric

Impact

This project will not alter the soils within the study area.

Biotic Resources*Terrestrial Communities*

Six terrestrial communities were identified in the study area: Acidic Cove Forest, Maintained/Disturbed land, Montane Alluvial Forest (Large River Subtype), Montane Alluvial Forest (Small River Subtype), Montane Oak Hickory Forest (White Pine Subtype), and White Pine Forest. These communities are described in the NRTR developed for this project. Table 5 shows the coverage of the terrestrial areas within the project study area and the potential impact area.

Table 5. Terrestrial Community Coverage

Community	Coverage (ac) <sup>1</sup>	Impact Area (ac) <sup>2</sup>
Acidic Cove Forest	3.3	1.6
Maintained/Disturbed	97.8	39.5

Table 5. Terrestrial Community Coverage

Community	Coverage (ac) <sup>1</sup>	Impact Area (ac) <sup>2</sup>
Montane Alluvial Forest (Large River Subtype)	9.9	6.0
Montane Alluvial Forest (Small River Subtype)	0.6	<0.01
Montane Oak Hickory Forest (White Pine Subtype)	40.3	12.5
White Pine Forest	1.6	0.1
Total:	175.9	59.6

<sup>1</sup>Study area also includes impervious surfaces (15.2 ac) and open water (7.1 ac) not included in this terrestrial community assessment.

<sup>2</sup>Impacts measured using slope stake limits plus 25 feet.

### Impact

The Preferred Alternative will impact up to 59.6 acres of terrestrial communities, the majority of which (39.5 acres) is maintained/disturbed land, when measured using slope stake limits plus 25 feet.

## Water Resources

### Surface Water

Water resources in the study area are part of the Upper French Broad basin (US Geological Survey [USGS] Hydrologic Unit Code [HUC] 06010105). Thirty-one streams were identified in the study area as indicated in Table 6.

Table 6. Streams in the Study Area

Stream Name	Map ID	NCDWR Index Number	Best Usage Classification
Cateechee Branch	Cateechee Branch	6-29	B
French Broad River	French Broad River	6-(27)	B
Williamson Creek	Williamson Creek	6-32	C, Tr, HQW
UT to French Broad River	SA	6-27	B
UT to French Broad River	SB	6-27	B
UT to French Broad River	SC	6-27	B
UT to French Broad River	SD	6-27	B
UT to French Broad River	SDD	6-27	B
UT to French Broad River	SE	6-27	B
UT to French Broad River	SEE	6-27	B
UT to French Broad River	SF	6-27	B
UT to French Broad River	SG	6-27	B

Table 6. Streams in the Study Area

Stream Name	Map ID	NCDWR Index Number	Best Usage Classification
UT to French Broad River	SH	6-27	B
UT to French Broad River	SI	6-27	B
UT to French Broad River	SJ	6-27	B
UT to French Broad River	SK	6-27	B
UT to French Broad River	SL	6-27	B
UT to French Broad River	SM	6-27	B
UT to French Broad River	SN	6-27	B
UT to Catechee Branch	SO	6-29	B
UT to French Broad River	SP	6-27	B
UT to French Broad River	SQ	6-27	B
UT to French Broad River	SR	6-27	B
UT to French Broad River	SS	6-27	B
UT to French Broad River	ST	6-27	B
UT to French Broad River	SU	6-27	B
UT to Williamson Creek	SV	6-32	C, Tr, HQW
UT to French Broad River	SW	6-27	B
UT to French Broad River	SX	6-27	B
UT to French Broad River	SY	6-27	B
UT to French Broad River	SZ	6-27	B

Five surface waters were identified within the study area.

Table 6. Potential Surface Waters in the Study Area

Surface Water	Jurisdictional?	Map ID Connection
TA	Yes	French Broad River
TB	Yes	French Broad River
TC	Yes	WN/French Broad River
PA	Yes	SL/SM
PB	Yes	SL/SM

There are no designated anadromous fish waters or Primary Nursery Areas (PNA) present in the study area. Williamson Creek, within the study area, has been designated as a High Quality Water (HQW) and NC Department of Water Resources (NCDWR) classified Trout Water (Tr) from its source to the French Broad River. There are no Outstanding Resource Waters (ORW) or Water Supply Watersheds (WS-I or WS-II) within, or within 1.0 mile downstream, of the study area. The North Carolina Department of Environmental Quality 2020 303(d) list of impaired waters includes Nicholson Creek, within 1.0 mile upstream of the study area, as an impaired water due to a fair, poor or severe benthos bioclassification. There are no buffer rules in place for the French Broad River basin.

### Impact

The Preferred Alternative will impact tributaries TA and TB. Approximately 169 feet and 499 feet, respectively, of temporary and/or permanent impacts are anticipated, based on slope stake limits plus 25 feet. These impacts are measured using the approximate location of where an on-site detour for bridge construction will be needed and include possible construction impacts from setting the end bent of the bridge over the French Broad River.

The Preferred Alternative will also impact approximately 0.04 acre of pond PA when measured using slope stake limits plus 25 feet.

Although there are no buffer rules in place for the French Broad River basin, NCDWR has identified Williamson Creek and its tributaries as trout waters. NCDOT will evaluate the need for a trout buffer variance during final design.

### *Groundwater*

Construction of the proposed project would not require any cuts that could alter the hydrostatic pressure of confined aquifers; no effects on groundwater supplies are anticipated from the proposed project.

## Waters of the US

Section 404 of the Clean Water Act requires regulation of discharges into “Waters of the United States.” The US Environmental Protection Agency (USEPA) is the principal administrative agency of the Clean Water Act. However, the USEPA has delegated authority to the US Army Corps of Engineers (USACE) for the responsibility of implementation, permitting, and enforcement of the provisions of the Clean Water Act. The USACE regulatory program is defined in 33 CFR 320-330.

Impacts to surface waters (e.g. streams and tributaries) and wetlands are subject to jurisdictional consideration under the Section 404 program. Any action that proposes to place fill into these areas falls under the jurisdiction of USACE under Section 404 of the Clean Water Act (33 USC 1344).

### *Streams*

Thirty-one streams and three tributaries were identified within the study area. The physical characteristics of the streams are detailed in the NRTR and jurisdictional characteristics are listed below in Table 7.

**Table 7. Jurisdictional Characteristics of Stream Resources**

Stream (MAP ID)	Classification	Compensatory Mitigation	River Basin Buffer	Study Area Length (ft) <sup>1</sup>	Impact Length (ft) <sup>2</sup>
Cateechee Branch	Perennial	Yes	Not Required	661	444

Table 7. Jurisdictional Characteristics of Stream Resources

Stream (MAP ID)	Classification	Compensatory Mitigation	River Basin Buffer	Study Area Length (ft) <sup>1</sup>	Impact Length (ft) <sup>2</sup>
French Broad River	Perennial	Yes	Not Required	7,884	271
Williamson Creek	Perennial	Yes	Not Required	495	66
SA	Perennial	Yes	Not Required	448	417
SB	Perennial	Yes	Not Required	195	45
SC	Perennial	Yes	Not Required	20	0
SD	Perennial	Yes	Not Required	156	96
SE	Perennial	Yes	Not Required	40	40
SF	Perennial	Yes	Not Required	140	0
SG	Perennial	Yes	Not Required	285	151
SH	Perennial	Yes	Not Required	231	70
SI	Perennial	Yes	Not Required	263	125
SJ	Perennial	Yes	Not Required	5	0
SK	Perennial	Yes	Not Required	128	7
SL	Perennial	Yes	Not Required	234	62
SM	Perennial	Yes	Not Required	81	28
SN	Perennial	Yes	Not Required	19	0
SO	Perennial	Yes	Not Required	65	27
SP	Perennial	Yes	Not Required	363	314
SQ	Intermittent	Undetermined	Not Required	22	22
SR	Perennial	Yes	Not Required	414	169
SS	Perennial	Yes	Not Required	186	97
ST	Intermittent	Undetermined	Not Required	54	0
SU	Perennial	Yes	Not Required	224	112
SV	Perennial	Yes	Not Required	114	0
SW	Perennial	Yes	Not Required	183	85
SX	Perennial	Yes	Not Required	323	93
SY	Perennial	Yes	Not Required	244	98

Table 7. Jurisdictional Characteristics of Stream Resources

Stream (MAP ID)	Classification	Compensatory Mitigation	River Basin Buffer	Study Area Length (ft) <sup>1</sup>	Impact Length (ft) <sup>2</sup>
SZ	Perennial	Yes	Not Required	426	175
SDD	Perennial	Yes	Not Required	138	0
SEE	Perennial	Yes	Not Required	12	12
Total:				14,239	3,024

<sup>1</sup>Length as reported in the NRTR.

<sup>2</sup>Impacts measured using slope stake limits plus 25 feet.

### Impact

The Preferred Alternative will impact approximately 3,024 feet of stream when measured using slope stake limits plus 25 feet.

### Wetlands

Nineteen wetlands were identified within the study area and were determined to be jurisdictional and are shown in Table 8.

Table 8. Jurisdictional Characteristics of Wetland Resources

MAP ID	Classification	Hydrologic Classification	Area (ac) in Study Area	Impact Area (ac) <sup>1</sup>
WA	Headwater Forest	Riparian	0.04	0.04
WB	Seep	Non-riparian	0.02	0.01
WC	Headwater Forest	Riparian	0.02	0.01
WD	Headwater Forest	Riparian	0.01	0.01
WE	Headwater Forest	Riparian	0.03	0.02
WF	Floodplain Pool	Riparian	0.13	0.06
WG	Headwater Forest	Riparian	<0.01	0
WH	Seep	Non-riparian	<0.01	0
WI	Headwater Forest	Riparian	0.03	0.03
WJ	Headwater Forest	Riparian	<0.01	0
WK	Seep	Non-riparian	0.02	0
WL	Floodplain Pool	Riparian	0.31	0.11
WM	Bottomland Hardwood Forest	Riparian	0.22	0.14
WN	Bottomland Hardwood Forest	Riparian	0.27	0.14

Table 8. Jurisdictional Characteristics of Wetland Resources

MAP ID	Classification	Hydrologic Classification	Area (ac) in Study Area	Impact Area (ac) <sup>1</sup>
WO	Bottomland Hardwood Forest	Riparian	0.34	0
WP	Floodplain Pool	Riparian	0.01	0.1
WQ	Headwater Forest	Riparian	<0.01	<0.01
WR	Headwater Forest	Riparian	0.04	0
WS	Headwater Forest	Riparian	<0.01	0
Total:			1.5	0.44

<sup>1</sup>Impacts measured using slope stake limits plus 25 feet.

### Impact

The Preferred Alternative will impact approximately 0.44 acre of jurisdictional wetlands as measured using slope stake limits plus 25 feet.

### Protected Species

As of November 17, 2021, the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) service lists ten federally protected species for Transylvania County. Descriptions of the species' habitat requirements and biological conclusions found in the NRTR are summarized in Table 9.

Table 9. Federally Protected Species in Transylvania County

Scientific Name	Common Name	Federal Status <sup>1</sup>	Habitat Present	Biological Conclusion
<i>Glyptemys muhlenbergii</i>	Bog turtle	T (S/A)	No	Not required
<i>Myotis grisescens</i>	Gray bat	E	Yes	No Effect
<i>Myotis septentrionalis</i>	Northern long-eared bat	T	Yes	No Effect <sup>2</sup>
<i>Alasmidonta raveneliana</i>	Appalachian elktoe	E	Yes	MALAA <sup>3</sup>
<i>Sarracenia rubra ssp. jonesii</i>	Mountain sweet pitcher-plant	E	No	No Effect
<i>Isotria medeoloides</i>	Small whorled pogonia	T	Yes	No Effect
<i>Geum radiatum</i>	Spreading avens	E	No	No Effect
<i>Helonias bullata</i>	Swamp pink	T	No	No Effect
<i>Spiraea virginiana</i>	Virginia spiraea	T	Yes	No Effect
<i>Gymnoderma lineare</i>	Rock gnome lichen	E	No	No Effect

<sup>1</sup>E = Endangered; T – Threatened; T(S/A) - Threatened due to similarity of appearance

<sup>2</sup>Project anticipated compliant with USACE SLOPES.

<sup>3</sup>MALAA – May Affect Likely to Adversely Affect

Impact

As noted in the NRTR and Biological Assessment (BA) the project will have no effect on the listed species for Transylvania County, except for the Appalachian elktoe. The following biological conclusion for the Appalachian elktoe is provided in the BA.

Construction of the R-5763 Wilson Road project is expected to result in unavoidable adverse effects to Appalachian elktoe. Therefore, it is concluded that the proposed action “**May Affect, Likely to Adversely Affect**” Appalachian elktoe. The direct and indirect adverse effects from this project, as well as the changes to the environmental baseline, should not preclude the expansion of the Appalachian elktoe through the Action Area.

The USACE submitted the BA on August 18, 2021, initiating formal consultation with USFWS. Comments have been received from the USFWS and are being addressed. The project is not expected to cause jeopardy based on the comments received. The Biological Opinion is anticipated in early 2022.

*Bald and Golden Eagle Protection Act*

As explained in the NRTR, no bald eagle habitat or known occurrences are within 1.0 mile of the project. Therefore, this resource is not anticipated to be impacted.

## 4.2 Human Environment

Resource information pertaining to the human environment was gathered and reviewed in the Community Impact Assessment (CIA) (HNTB, 2018) for this project.

### Community Resources and Land Use

*Land Use*

Existing land use in the area is largely pastoral, consisting predominantly of agricultural land and residential development. While there are some commercial businesses within the study area, residences are predominantly upslope, to the east of Wilson Road. Commercial and industrial businesses are also found along Old US 64/Old Hendersonville Highway within the project area.

The portion of the project area west of Wilson Road, south of the French Broad River, is within the extra-territorial jurisdiction of the City of Brevard. The portion of the study area that is north of the French Broad River is within the municipal limits of the City of Brevard. The remaining area is within Transylvania County. While there is no county-wide zoning in Transylvania County, several land use ordinances apply to county properties, including a Flood Damage Prevention Ordinance and subdivision regulations.

Area land use zoning districts are summarized in Table 10.

**Table 10. Zoning Districts within the Study Area**

District	Percentage of Study Area	Summary of Description
City of Brevard Zoning Districts		

Table 10. Zoning Districts within the Study Area

District	Percentage of Study Area	Summary of Description
GR	91	The General Residential District is intended for the City's existing, predominately residential, neighborhoods as well as provide for new primarily residential development in accordance with this pattern. These districts are differentiated only by the density of the overall development relative to the planning goals of the City as set forth in the Land Use Plan.
NMX	3	The Neighborhood Mixed-Use District is intended to provide pedestrian-scaled, higher density residential homes and opportunities for limited scale commercial activities along existing mixed-use corridors, in areas of transition, and at the functional center of new neighborhoods. Development in this district should encourage pedestrian activity through construction of mixed-use buildings and connections to adjacent neighborhoods. Buildings in this district are typically small and detached.
GI	4	The General Industrial District is primarily for general industrial land uses and a broader variety of operations, including manufacturing, processing, and assembling of parts and products and distribution of products at wholesale or retail. The standards established for general industrial areas are designed to promote sound permanent industrial development.
CMX	2	The Corridor Mixed Use District is coded to facilitate convenient access, minimize traffic congestion, and reduce the visual impact of auto-oriented uses along the city's major thoroughfares. In addition, this district is established to ensure the continuation of the natural beauty and green appearance of the major thoroughfares leading into the city; for enhancement of the appearance of newly developed and redeveloped properties; and for the promotion of public safety by limiting the number and location of access points.

#### *Land Use Plans*

Transylvania County and the City of Brevard include this project in their land use plans.

The *2025 Transylvania County Comprehensive Plan (2017)* discusses transportation needs as part of the economic health factors of the County. Roads are discussed in general and the plan refers to the Land of Sky RPO and NCDOT for planning needs. In addition, the plan notes that the County has a higher percentage of bicycle commuters when compared to the national average and has eight NCDOT numbered bicycle routes, one of which includes Wilson Road.

The *City of Brevard 2015 Comprehensive Plan (2015)* includes transportation as one of its five functional elements. The plan notes that transportation infrastructure will play a significant role in defining the City's ability to take on new growth and development as well as maintain its quality of place. In addition,

Policy 4.3.B calls for the rehabilitation of the Wilson Road French Broad River access to create a new opportunity for citizens and visitors to experience recreation and nature.

The City of Brevard *Pisgah Forest Small Area Plan* (2016) is intended to “guide future public and private investment throughout this neighborhood”. This plan includes Wilson Road, particularly its intersection with Old US 64/ Old Hendersonville Highway and the intersection of Ecusta Road with Old US 64/ Old Hendersonville Highway. The plan notes that there are major traffic issues in the vicinity of these two intersections that warrant an in-depth study, not only to improve transportation but for redevelopment opportunities. The Plan proposes realigning Wilson Road with Ecusta Road and using a roundabout instead of a signalized intersection.

### Impact

The proposed project is consistent with the land use plans of the City of Brevard and Transylvania County. The area surrounding the project is generally rural within the floodplain, west of Wilson Road, and residential to the east of Wilson Road. It is not anticipated that this project alone will induce land use changes.

#### *Title VI Evaluation*

As documented in the CIA, census data indicates a notable presence of low-income populations meeting the criteria for Environmental Justice (EJ) and populations protected by Title VI and related statutes within the Demographic Study Area, and low-income communities were observed within the Direct Community Impact Area (DCIA) during the field visit and were noted by local planners. The Demographic Study Area (DSA) and DCIA are shown in Figure 3. Census Tract 9603.00, Block Group 1 meets the criterion for Environmental Justice where ‘Near Poor: Between 100 percent and 149 percent of Poverty Level’ exceeds 25 percent of the block group population at 47.1 percent.

The Blythe Mobile Home Park consists of ten mobile homes, nine of which are occupied (as of July 2020), according to the owner, Thomas Blythe. Of the nine occupied residences, one home is resident-owned and the other eight are owned by Mr. Blythe; as is the one unoccupied residence.

### Impact

NCDOT adheres to Title VI of the Civil Rights Act, which provides that no person in the United States shall, on the grounds of race, color or national origin, be excluded in participation in, be denied the benefits of, or be subjected to discrimination under any program or activity.

Notably adverse community impacts are anticipated with this project and these effects appear to affect Title VI populations notably more than the general population. Benefits and burdens resulting from the project are not anticipated to be equitably distributed throughout the community. Disparate impacts are anticipated under Title VI.

The proposed design will eliminate the Blythe Mobile Home Park to realign Wilson Road with Ecusta Road. NCDOT has discussed this acquisition and relocation with Mr. Blythe and has notified residents of the mobile home park through the newsletter and USACE public notice, which are further discussed in Section 5.2. To mitigate this impact, residents in the Blythe Mobile Home Park will receive relocation assistance in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and NC General Statutes 133-5 through 133-18.

#### *Neighborhoods and Communities*

Some homes and neighborhoods are located adjacent to the Wilson Road corridor. There are three primary subdivisions (Glen Cannon, Knob Creek, and Middle Mount) with ingress/egress on Wilson Road.

Blythe Mobile Home Park is located at the intersection of Ecusta Road and Old US 64/ Old Hendersonville Highway.

#### Impact

With the exception of Blythe Mobile Home Park, discussed previously in *Title VI Evaluation*, the subdivisions and communities along Wilson Road will remain intact. Residents may experience some disruption during construction; however, no permanent impacts are anticipated.

#### *Relocations*

Due to the proximity of homes adjacent to and within the proposed footprint of the roadway, relocations will be required.

#### Impact

The EIS Relocation Report (NCDOT, 2020) indicates that the project will have 13 displacees, five owners and eight tenants. All displacees are residential; no businesses, farms or non-profits will be displaced. Transylvania County has sufficient decent, safe, and sanitary housing stock available; however, the Report notes that Last Resort Housing should be considered as appropriate and in accordance with State law.

### Public Lands, Scenic and Recreation Areas

The French Broad River is designated as a State Paddle Trail for its entire length in North Carolina. The Pisgah Forest River Access is located east of Wilson Road, just north of the bridge over the French Broad River. The access is owned and maintained by Transylvania County Parks and Recreation. The access has a concrete boat launch, gravel parking lot, and kiosk.

#### Impact

Construction of the new bridge over the French Broad River may limit user access and safe passage along the paddle trail during demolition and construction activities at the new Wilson Road bridge. The proposed design realigns Wilson Road to intersect with Ecusta Road. The new bridge will not have bents in the water and the old bridge will be removed. This will increase the navigability of the River through this section.

The remnant portion of Wilson Road from Old US 64/Old Hendersonville Highway to the existing bridge will end in a cul de sac just beyond the River Access driveway. The River Access may be restricted during demolition of the old Wilson Road bridge and construction of the cul de sac once the bridge is removed. The entrance to the River Access will be relocated to the cul de sac.

### Cultural Resources

#### *Architectural History*

NCDOT identified six historic resources in the study area, or Area of Potential Effects (APE), and determined that three are eligible for listing on the National Register of Historic Places (NRHP), in accordance with Section 106 of the National Historic Preservation Act (NHPA). The four resources are the Mary and Albert Jenkins House at 423 Three Mile Knob Road; the Glen Cannon Country Club on Glen Cannon Clubhouse Dr; the US Post Office - Pisgah Forest at 1575 Old Hendersonville Highway; and Elizur Patton House at 1699 Old Hendersonville Highway.

#### Impact

The project will not directly impact the US Post Office, which is located just east of the intersection of Wilson Road and Old US 64/ Old Hendersonville Highway. However, there are some road improvements

adjacent to the historic property boundary. The proposed design of the project shifts away from the Glen Cannon Country Club frontage on Wilson Road. NCDOT has coordinated with Glen Cannon Property Owners Association and will provide an easement on NCDOT right of way for the Glen Cannon sign.

The proposed roundabout at Ecusta Road, Old US 64/Old Hendersonville Highway, and Wilson Road will require approximately 0.028 acre of easement and 0.028 acre of new right of way to accommodate cut and fill from the Elizur Patton House property. NCDOT will protect the large tree at the corner of the property during construction.

To prevent overtopping during the 50-year storm event, NCDOT will shift the road on new alignment on a wooded section of the Jenkins House property, eliminating approximately 0.7 acre of trees and the original driveway access on Wilson Road. In addition, the existing drainage has been redesigned to provide more long-term stability for the receiving pond on the downstream side of Wilson Road. The proposed drainage will result in a split flow system designed to help mitigate adverse downstream impacts during higher than base flow events. Base flow events will be directed towards the pond to maintain existing drainage patterns, but for flows higher than daily flow events approximately half of stream flow will be directed towards the downstream pond while the other half will be conveyed through a new back station trunk line system towards the French Broad River. The upstream channel will be armored with rip rap due to the grade (12.8 percent) of the streambed to provide a properly sized cross pipe connection. NCDOT has coordinated with the property owner to improve the driveway access on Three Mile Knob Road and provide vegetative screening between the rip rap and the house.

On July 27, 2021 the NC Historic Preservation Office (NC HPO) and USACE determined that the project would have No Effect on the US Post Office – Pisgah Forest or Glen Cannon Country Club and No Adverse Effect on the Mary and Albert Jenkins House or the Elizur Patton House (Appendix A). The conditions for design and construction for the No Adverse Effect determinations are included in the Project Commitments.

#### *Archaeology*

NCDOT completed an archaeological review and survey of the study area and recorded 12 new archaeological resources.

#### Impact

On January 3, 2019, NCDOT found that there were no NRHP-eligible or listed archaeological sites present or affected by the subject project (Appendix A). The determination was reverified in December 2021 due to a minor exceedance of the Area of Potential Effects. The revised form is also in Appendix A.

### Farmland

#### *Farmland Soils*

North Carolina Executive Order 96, Preservation of Prime Agricultural and Forest Lands requires all state agencies to consider the impact of land acquisition and construction projects on prime and statewide important farmlands soils, as designated by the Natural Resources Conservation Service (NRCS).

Approximately 79.3 acres, or 42 percent, of the study area is within the US Census Bureau identified Urban Area for Brevard, NC. The remaining areas are subject to North Carolina Executive Order 96, Preservation of Prime Agricultural and Forest Lands. Table 11 shows the farmland soil types within the study area.

**Table 11. Farmland Soils within the Study Area**

Rating	Area (ac) <sup>1</sup>	Impact Area (ac) <sup>2</sup>
Prime farmland soils	46.6	21.4
Farmland of statewide importance	5.8	3.8
Farmland of local importance	5.7	2.0

<sup>1</sup> Area of farmland soils within the study area.

<sup>2</sup> Impacts measured using slope stake limits plus 25 feet.

### Impact

Using slope stake limits plus 25 feet, it is anticipated that this project will impact 21.4 acres of prime farmland soils and 3.8 acres of farmland of statewide importance.

### Voluntary Agricultural Districts

There are no Voluntary Agricultural Districts (VADs) or Enhanced VADs (EVADs) within the project footprint.

### Impact

There subject project will have no effect on VADs or EVADs.

### Air Quality

The project is in Transylvania County, which complies with the National Ambient Air Quality Standards.

### Impact

The proposed project is in an attainment area; therefore, 40 CFR Parts 51 and 93 are not applicable. Consequently, the proposed project is not anticipated to create any adverse effects on the air quality of this attainment area.

### Noise

#### Introduction

In accordance with Title 23 Code of Federal Regulations Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise (Title 23 CFR 772) and the North Carolina Department of Transportation Traffic Noise Policy, each Type I highway project must be analyzed for predicted traffic noise impacts. In general, Type I projects are proposed State or Federal highway projects that construct a highway on new location, add new through lanes to an existing highway, substantially change the horizontal or vertical alignment of an existing highway, add or relocate interchange ramps or loops to complete an existing partial interchange, or involve new construction or substantial alteration of transportation facilities such as weigh stations, rest stops, ride-share lots or toll plazas.

Traffic noise impacts are determined through implementing the current Traffic Noise Model (TNM<sup>®</sup>) approved by the Federal Highway Administration (FHWA) and following procedures detailed in Title 23 CFR 772, the NCDOT Traffic Noise Policy and the NCDOT Traffic Noise Manual. When traffic noise impacts are predicted, examination and evaluation of alternative noise abatement measures must be considered

for reducing or eliminating these impacts. Construction noise impacts may occur if noise-sensitive receptors are in proximity to project construction activities. All reasonable efforts should be made to minimize exposure of noise sensitive areas to construction noise impacts.

The source of this traffic noise information is Traffic Noise Report, Proposed Improvements to Wilson Road (SR 1540) From US 276 to SR 1504 (Old US 64/Old Hendersonville Highway), STIP Project R-5763, Transylvania County (HNTB, September 2018).

#### Traffic Noise Impacts and Noise Contours

The maximum number of receptors in each project alternative predicted to be impacted by future traffic noise is shown in Table 12. The table includes those receptors expected to experience traffic noise impacts by either approaching or exceeding the FHWA Noise Abatement Criteria or by substantially increasing exterior noise levels as defined in the NCDOT Traffic Noise Policy.

**Table 12. Traffic Noise Impacts**

Alternative	Residential (NAC B)	Places of Worship/Schools, Parks, etc. (NAC C & D)	Businesses (NAC E)	Total
2040 Build	2	0	0	2

\*Per TNM<sup>®</sup>2.5 and in accordance with 23 CFR Part 772

The maximum extent of the 71- and 66- dB(A) noise level contours measured from the centerline of Wilson Road is less than 20 feet and between 20 and 30 feet, respectively.

#### Traffic Noise Abatement Measures

Measures for reducing or eliminating the traffic noise impacts were considered for all impacted receptors in each alternative. The primary noise abatement measures evaluated for highway projects include highway alignment changes, traffic system management measures, establishment of buffer zones, noise barriers and noise insulation (NAC D only). For each of these measures, benefits versus allowable abatement quantity (reasonableness), engineering feasibility, effectiveness, and other factors were included in the noise abatement considerations.

Substantially changing the highway alignment to minimize noise impacts is not considered to be a viable option for this project due to engineering and/or environmental factors. Traffic system management measures are not considered viable for noise abatement due to the negative impact they would have on the capacity and level of service of the proposed roadway. Costs to acquire buffer zones for impacted receptors will exceed the NCDOT base dollar value of \$22,500 plus an incremental increase as defined in the NCDOT Traffic Noise Manual, causing this abatement measure to be unreasonable.

#### Noise Barriers

Noise barriers include two basic types: earthen berms and noise walls. These structures act to diffract, absorb, and reflect highway traffic noise.

Due to the proximity of development to Wilson Road, area topography, and the limited right of way along the project corridor, there is insufficient space to construct earthen berms as noise abatement for the project. Therefore, earthen berms are not considered feasible noise abatement measures for the project.

Due to the presence of driveways with direct access to Old Hendersonville Highway near the predicted traffic noise impacts, noise walls would not be a feasible option to provide noise abatement. Additionally,

due to the separate locations of the two isolated impacts, noise walls could not meet feasibility criteria because exterior noise levels could not be reduced by at least five (5) dB(A) for at least two impacted receptors, as defined by the noise abatement measure feasibility criteria of the NCDOT Traffic Noise Policy. Therefore, noise abatement would not be feasible.

### Impact

Based on this preliminary study, traffic noise abatement is not recommended and no noise abatement measures are proposed. This evaluation completes the highway traffic noise requirements of Title 23 CFR Part 772. No additional noise analysis will be performed for this project unless warranted by a substantial change in the project's design concept or scope.

In accordance with NCDOT Traffic Noise Policy, the Federal/State governments are not responsible for providing noise abatement measures for new development for which building permits are issued after the Date of Public Knowledge. The Date of Public Knowledge of the proposed highway project will be the approval date of the combined State Environmental Assessment (SEA)/Finding of No Significant Impact (FONSI). NCDOT strongly advocates the planning, design and construction of noise-compatible development and encourages its practice among planners, building officials, developers and others.

### Hazardous Materials

The NCDOT GeoEnvironmental Section performed a records search of readily available information for the project study area (GeEnvironmental Planning Report, 2018) and identified three sites of concern (Table 12).

**Table 12. Geoenvironmental Sites of Concern**

Site	Location	UST Facility ID	Property Name	UST and Property Owner	Anticipated Impact
1	Junction of Ecusta Road & US 64	0-02173	Vacant Building (former Sinard Brothers property)	Property Owner: Houck & Sons Inc. UST Owner: Hale Siniard, Jr.	Low Monetary and Scheduling Impacts
2	1591 Old Hendersonville Highway	00-0-0000035046	One Stop #5	Property Owner: Gillani Shamsuddin & Salimah UST Owner: Sam Gillani	Low Monetary and Scheduling Impacts
q3	Vacant lot next to 895 Wilson Road	Not Applicable	Knob Creek Flyash Landfill NCD 980729677	Property Owner: Knob Creek Properties	Low Monetary and Scheduling Impacts

### Impacts

No impacts are anticipated to any of the geoenvironmental sites of concern within the project study area.

### Indirect and Cumulative Impacts

In 2019, an Indirect and Cumulative Effects screening was performed in conjunction with the CIA. Based on the result of the Indirect Effects Screening matrix, the need for a Land Use Scenario Assessment was

determined as “Not Likely”. This is because there is a medium to low concern for indirect and cumulative effects due to this project. Potential land use effects as a result of R-5763 in combination with other public and private actions are low. Only the portion of the project that consists of the realignment of Wilson Road to meet Ecusta Road at Old US 64/Old Hendersonville Highway is anticipated to change traffic patterns. These changes are not expected to be substantial nor lead to an increase in vehicles traveling the corridor.

#### Exhibit 4.

Indirect Land Use Effects Screening Tool - STIP R-5763 - SR 1540 (Wilson Road) roadway upgrade from US 276 to SR 1504 (Old US 64/Old Hendersonville Highway)										
Rating	Scope of Project	Travel Time Savings	Forecasted Population Growth	Forecasted Employment Growth	Available Land	Water/Sewer Availability	Market for Development	Public Policy	Notable Environmental Features	Result
<b>More Concern</b>	Major New Location	> 10 minute travel time savings	> 3% annual population growth	Substantial # of New Jobs Expected	5000+ Acres of Land	All services existing / available	Development activity abundant	Less stringent: no growth management	Targeted or Threatened Resource	
↑									X	
↔	X			X				X		
↓			X		X	X				Land Use Scenario Assessment Not Likely
<b>Less Concern</b>	Very Limited Scope	No travel time savings	No population growth or decline	No new Jobs or Job Losses	Limited Land Available	No service available now or in future	Development activity lacking	More stringent: growth management	Features incorporated in local protection	

Given the relatively limited scope of this project, when considered in the context of other past, present, and future actions, the anticipated cumulative effect of this project will be minimal. Any direct natural environment impacts of the project will be addressed through avoidance, minimization, or mitigation measures consistent with programmatic agreements with the natural resource agencies during the permitting processes. Current and future developments by other entities will be required to follow local, state, and federal guidelines and permitting regulations, as appropriate. NCDOT will coordinate with the USACE during development and through the permitting process and will implement any required mitigation measures.

## 5. COMMENTS AND COORDINATION

### 5.1 Section 404/NEPA Merger Process

NCDOT prepared a Merger Screening packet for the USACE and NC Division of Water Resources (NCDWR) that described the subject project, proposed purpose and need, and potential impacts of the project to jurisdictional features and other natural and human resources. The USACE recommended the subject project as a candidate for the Merger Process on September 17, 2018.

The Merger Team, consisting of the USACE, NCDWR, US Environmental Protection Agency, USFWS, NCWRC, NC HPO, NCDOT, and the Land of Sky RPO, met to discuss the subject project and concurred on the purpose and need and study area of the project (CP 1) on February 13, 2019. On March 20, 2019 the Merger Team concurred on CP2, Detailed Study Alternatives, and CP2A, Bridging Decisions and Alignment Review. Concurrence Point 3, Least Environmentally Damaging Practicable Alternative (LEDPA), and CP 4A, Avoidance and Minimization Measures, were concurred upon on July 16, 2020.

The Eastern Band of Cherokee Indians, Cherokee Nation, and United Keetowah Band were invited to participate in the Merger meetings. None of the tribes had comments regarding the project and none

chose to sign concurrence (tribal concurrence is not required to move the project forward in the Merger Process). Any additional tribal coordination will be coordinated in consultation with the US Army Corps of Engineers.

Signed Merger concurrence forms and meeting summaries are provided in Appendix A.

## 5.2 Public Participation

### Public Notice

As part of the Merger Process, the USACE issued a Public Notice (SAW-2018-00986) for the subject project on April 23, 2020 with a 30-day comment period ending May 26, 2020. The Public Notice was sent to resource agencies, property owners with jurisdictional features, historic resources, and the environmental justice community. USACE received five comments in response to its Public Notice. The National Oceanographic and Atmospheric Association (NOAA) and Catawba Nation expressed no comment on the project. NC HPO noted that there are three historic resources in the project study area that require an effects determination. NCWRC expressed concern regarding animal crossings of Wilson Road and potential indirect effects of the project. Turf Mountain Sod expressed concern regarding property acquisition and access to its fields post-construction. NCDOT responded to NCWRC and Turf Mountain Sod on June 19, 2020 and June 11, 2020, respectively. Comments received and responses are located in Appendix B.

### Newsletter

In conjunction with the USACE Public Notice, NCDOT sent out a newsletter to all property owners and subdivisions whose ingress/egress is Wilson Road. The newsletter provided the purpose and need, history, schedule, proposed design, potential impacts, and cost. The newsletter is located in Appendix B.

## 6. BASIS FOR FINDING OF NO SIGNIFICANT IMPACT

Based upon the evaluation contained in this assessment, and upon comments received from federal, state, and local agencies, it is the finding of the NCDOT that R-5763 will not have significant adverse impacts to the human or natural environment. The project, as proposed, is consistent with local, regional, and statewide planning efforts and would not disrupt the communities adjacent to it. Consistent with this evaluation, a Finding of No Significant Impact is also applicable to this project. Therefore, neither a state environmental impact study nor further environmental analysis is required.

## 7. REFERENCES

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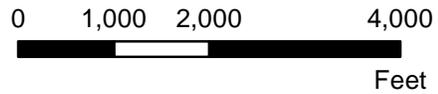
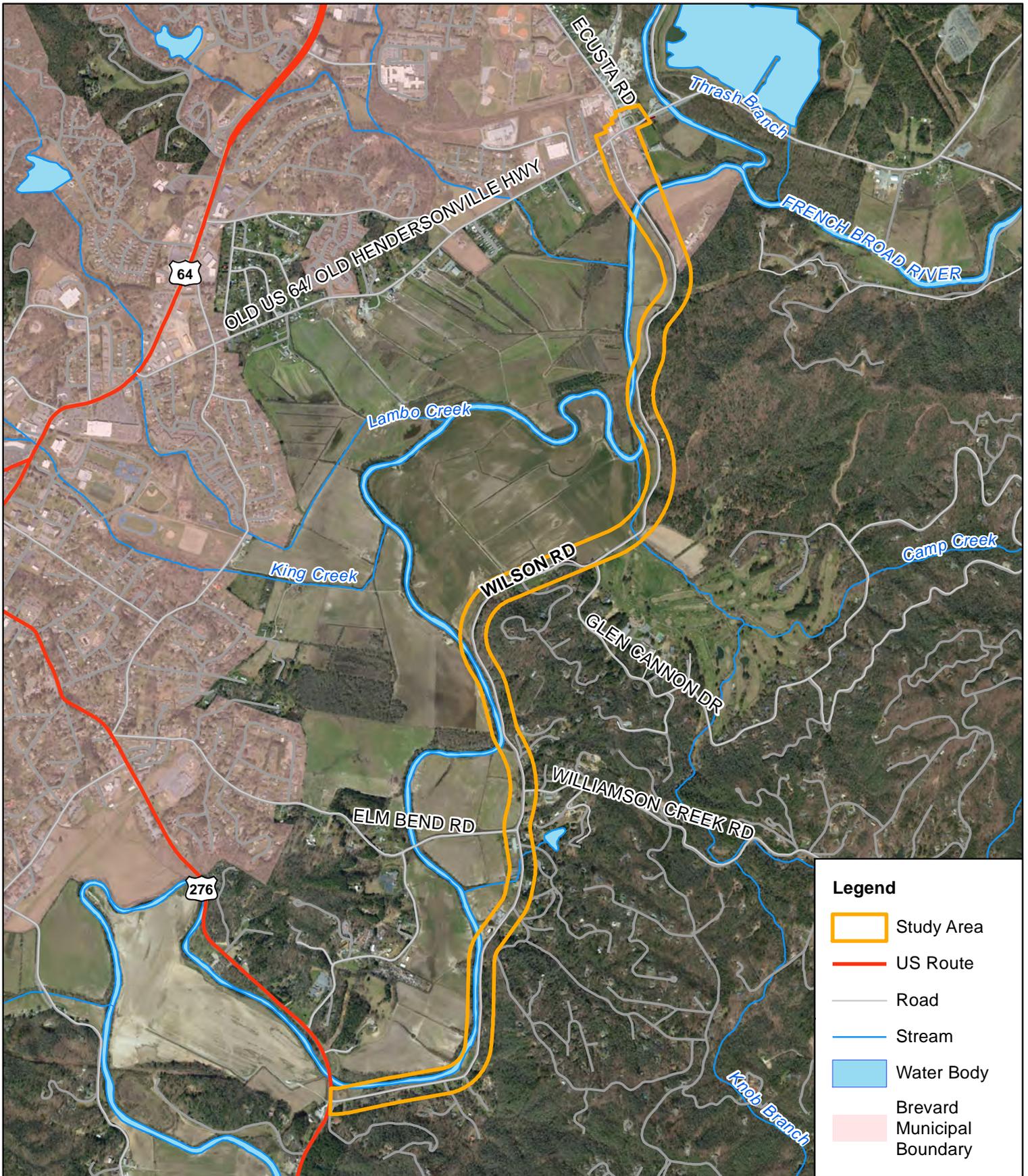
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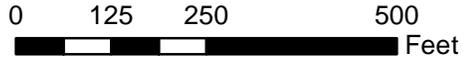
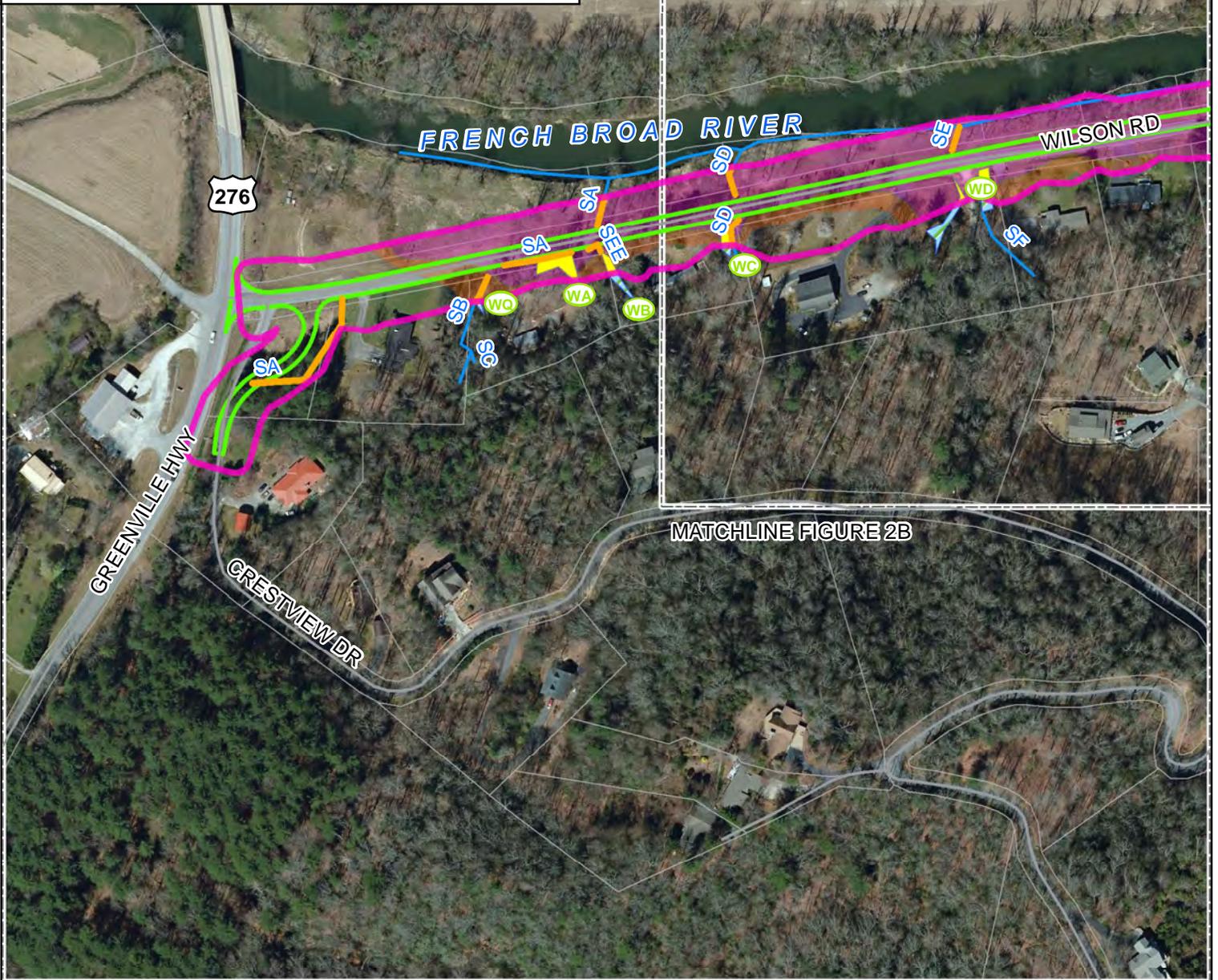
## FIGURES



**FIGURE 1**  
**STUDY AREA**  
STIP Project No. R-5763  
Improvements to Wilson Road from US 276  
to Old US 64/Old Hendersonville Hwy  
Brevard, Transylvania County

**Legend**

- |  |   |
|--|---|
|  Slope Stake Limit with 25-foot buffer |  Potential Pond Impact |
|  Wetzel Family Cemetery                |  Delineated Stream     |
|  Road                                  |  Delineated Wetland    |
|  Proposed Edge of Travel               |  Delineated Pond       |
|  Proposed Bridge                       |  NRHP Eligible Sites   |
|  Potential Stream Impact               |  Property Boundary     |
|  Potential Wetland Impact              | <b>Potential FEMA Impact</b>  |
|  |  100-year Flood Zone   |
|  |  500-year Flood Zone   |

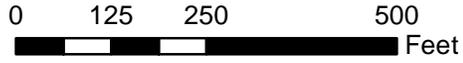
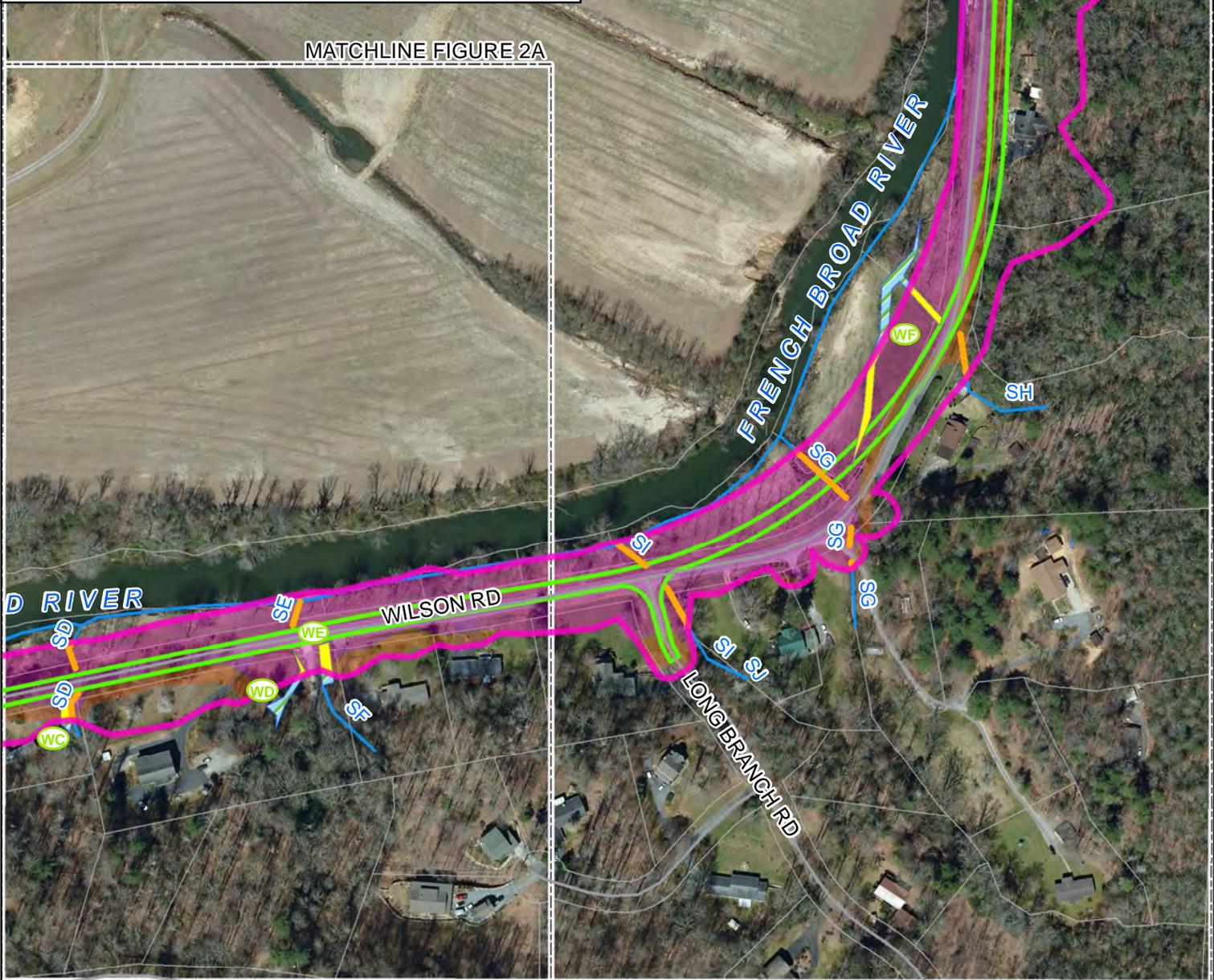


Data Source: HNTB, Transylvania Co GIS, NCDOT  
HNTB, November 2021

**FIGURE 2A**  
 POTENTIAL IMPACTS TO  
 PREFERRED ALTERNATIVE  
 STIP Project No. R-5763  
 Improvements to Wilson Road from US 276  
 to Old US 64/Old Hendersonville Hwy  
 Brevard, Transylvania County

**Legend**

- |  |   |
|--|---|
|  Slope Stake Limit with 25-foot buffer |  Potential Pond Impact |
|  Wetzel Family Cemetery                |  Delineated Stream     |
|  Road                                  |  Delineated Wetland    |
|  Proposed Edge of Travel               |  Delineated Pond       |
|  Proposed Bridge                       |  NRHP Eligible Sites   |
|  Potential Stream Impact               |  Property Boundary     |
|  Potential Wetland Impact              | <b>Potential FEMA Impact</b>  |
|  |  100-year Flood Zone   |
|  |  500-year Flood Zone   |

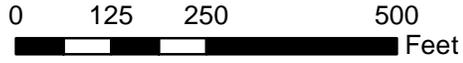


Data Source: HNTB, Transylvania Co GIS, NCDOT  
HNTB, November 2021

**FIGURE 2B**  
 POTENTIAL IMPACTS TO  
 PREFERRED ALTERNATIVE  
 STIP Project No. R-5763  
 Improvements to Wilson Road from US 276  
 to Old US 64/Old Hendersonville Hwy  
 Brevard, Transylvania County

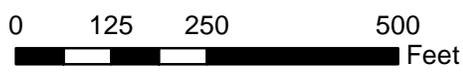
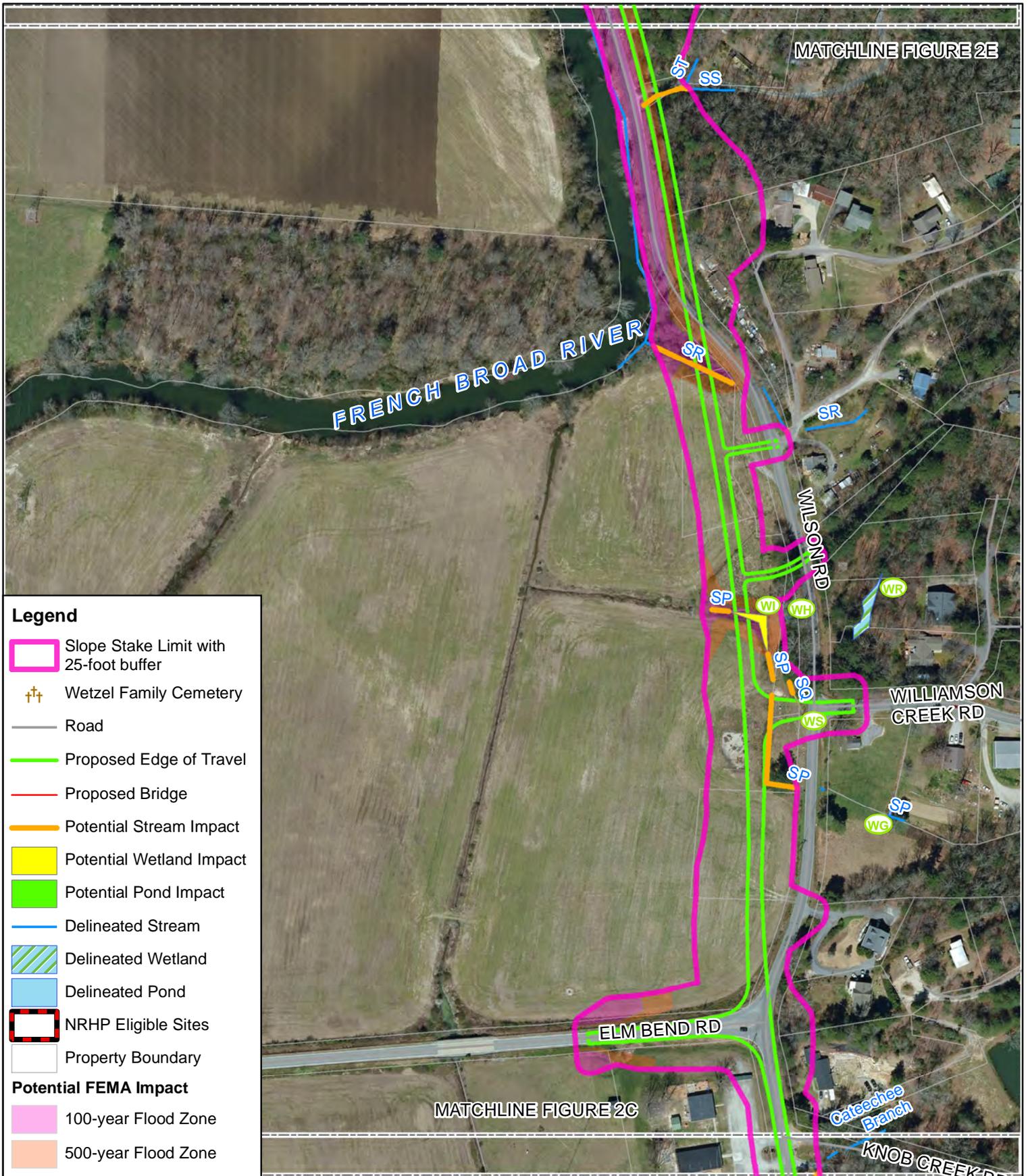
**Legend**

- |  |                                       |   |                       |
|--|---------------------------------------|---|-----------------------|
|  | Slope Stake Limit with 25-foot buffer |  | Potential Pond Impact |
|  | Wetzel Family Cemetery                |  | Delineated Stream     |
|  | Road                                  |  | Delineated Wetland    |
|  | Proposed Edge of Travel               |  | Delineated Pond       |
|  | Proposed Bridge                       |  | NRHP Eligible Sites   |
|  | Potential Stream Impact               |  | Property Boundary     |
|  | Potential Wetland Impact              | <b>Potential FEMA Impact</b>  |                       |
|  |                                       |  | 100-year Flood Zone   |
|  |                                       |  | 500-year Flood Zone   |



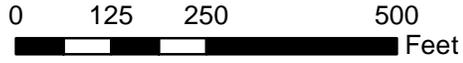
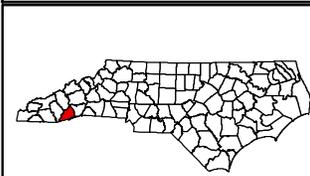
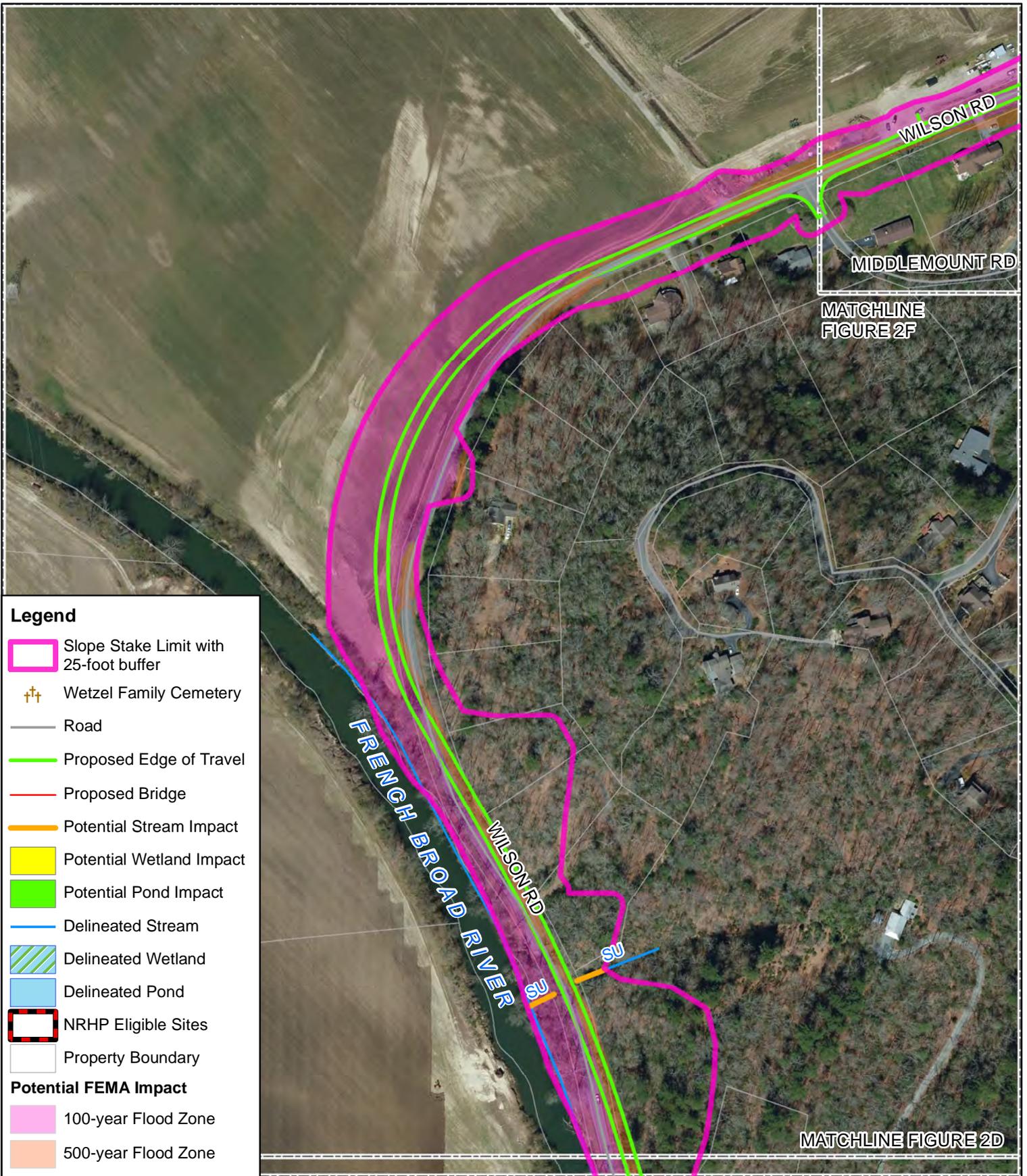
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HNTB, November 2021

**FIGURE 2C**  
 POTENTIAL IMPACTS TO  
 PREFERRED ALTERNATIVE  
 STIP Project No. R-5763  
 Improvements to Wilson Road from US 276  
 to Old US 64/Old Hendersonville Hwy  
 Brevard, Transylvania County



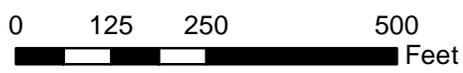
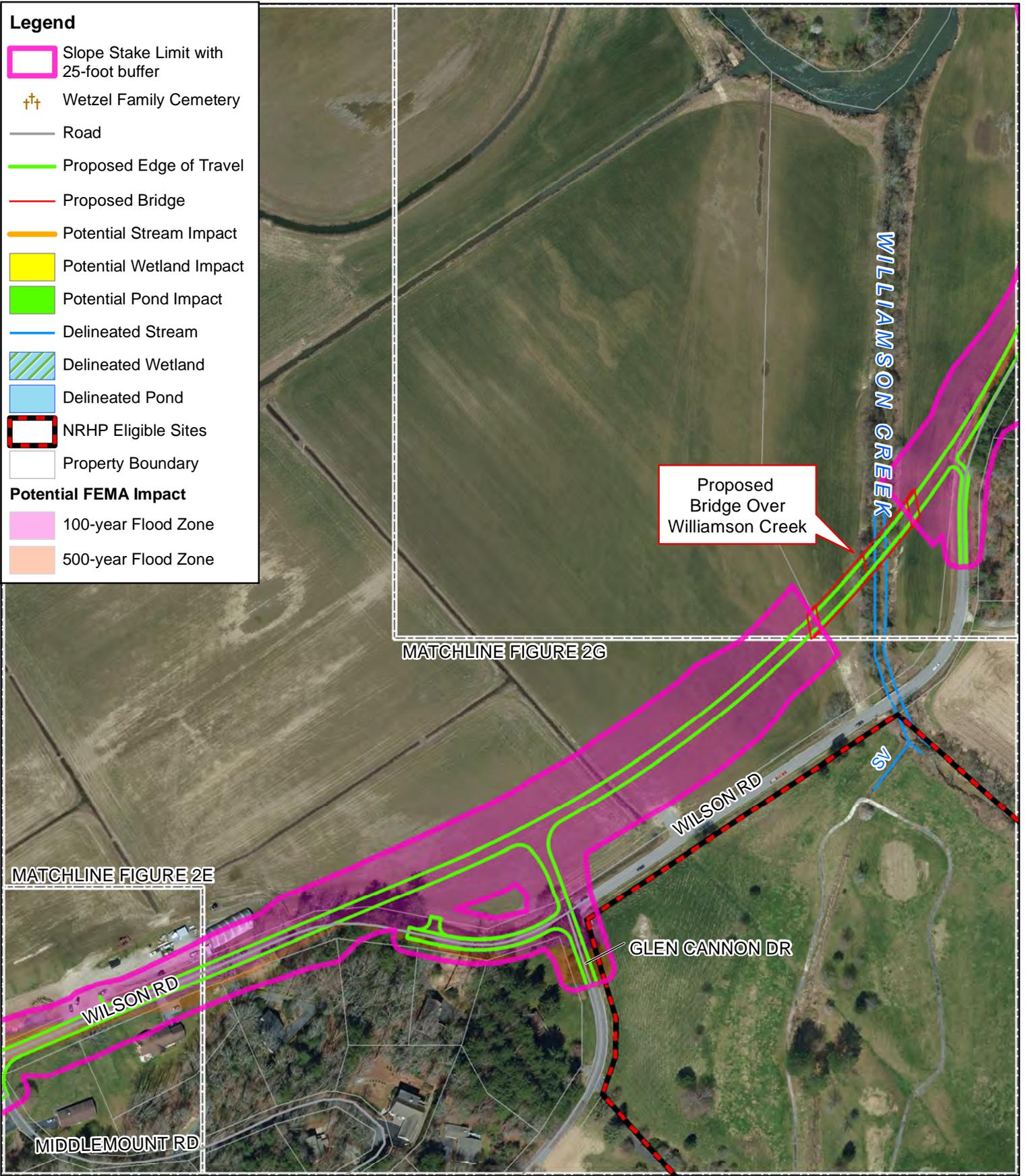
Data Source: HNTB, Transylvania Co GIS, NCDOT  
HNTB, November 2021

**FIGURE 2D**  
 POTENTIAL IMPACTS TO  
 PREFERRED ALTERNATIVE  
 STIP Project No. R-5763  
 Improvements to Wilson Road from US 276  
 to Old US 64/Old Hendersonville Hwy  
 Brevard, Transylvania County



Data Source: HNTB, Transylvania Co GIS, NCDOT  
HNTB, November 2021

**FIGURE 2E**  
 POTENTIAL IMPACTS TO  
 PREFERRED ALTERNATIVE  
 STIP Project No. R-5763  
 Improvements to Wilson Road from US 276  
 to Old US 64/Old Hendersonville Hwy  
 Brevard, Transylvania County

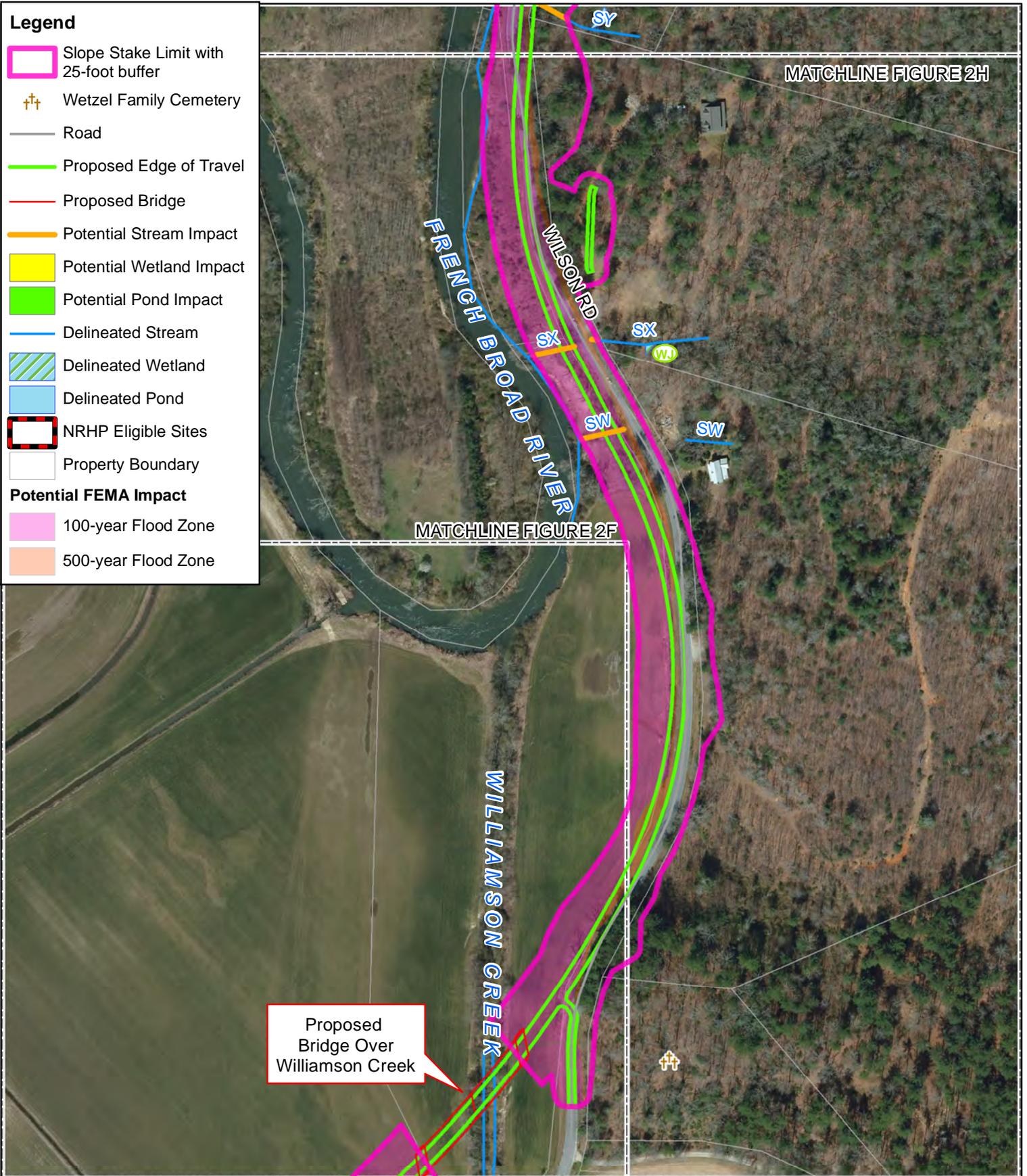


Data Source: HNTB, Transylvania Co GIS, NCDOT  
HNTB, November 2021

**FIGURE 2F**  
 POTENTIAL IMPACTS TO  
 PREFERRED ALTERNATIVE  
 STIP Project No. R-5763  
 Improvements to Wilson Road from US 276  
 to Old US 64/Old Hendersonville Hwy  
 Brevard, Transylvania County

**Legend**

-  Slope Stake Limit with 25-foot buffer
-  Wetzel Family Cemetery
-  Road
-  Proposed Edge of Travel
-  Proposed Bridge
-  Potential Stream Impact
-  Potential Wetland Impact
-  Potential Pond Impact
-  Delineated Stream
-  Delineated Wetland
-  Delineated Pond
-  NRHP Eligible Sites
-  Property Boundary
- Potential FEMA Impact**
-  100-year Flood Zone
-  500-year Flood Zone

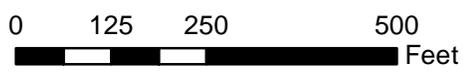


**FIGURE 2G**

POTENTIAL IMPACTS TO  
PREFERRED ALTERNATIVE

STIP Project No. R-5763

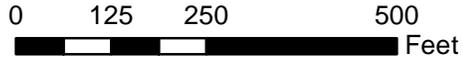
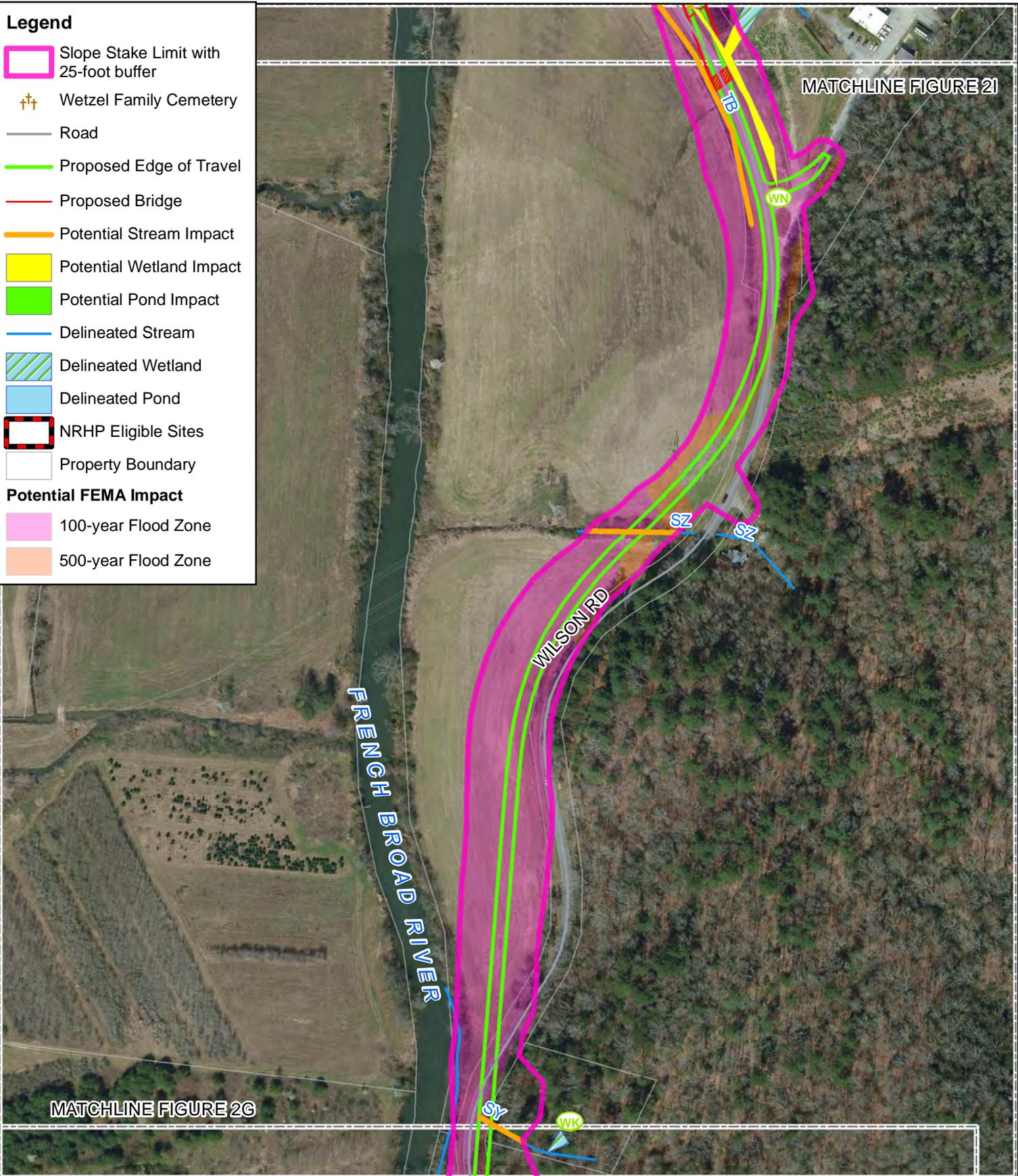
Improvements to Wilson Road from US 276  
to Old US 64/Old Hendersonville Hwy  
Brevard, Transylvania County



Data Source: HNTB, Transylvania Co GIS, NCDOT  
HNTB, November 2021

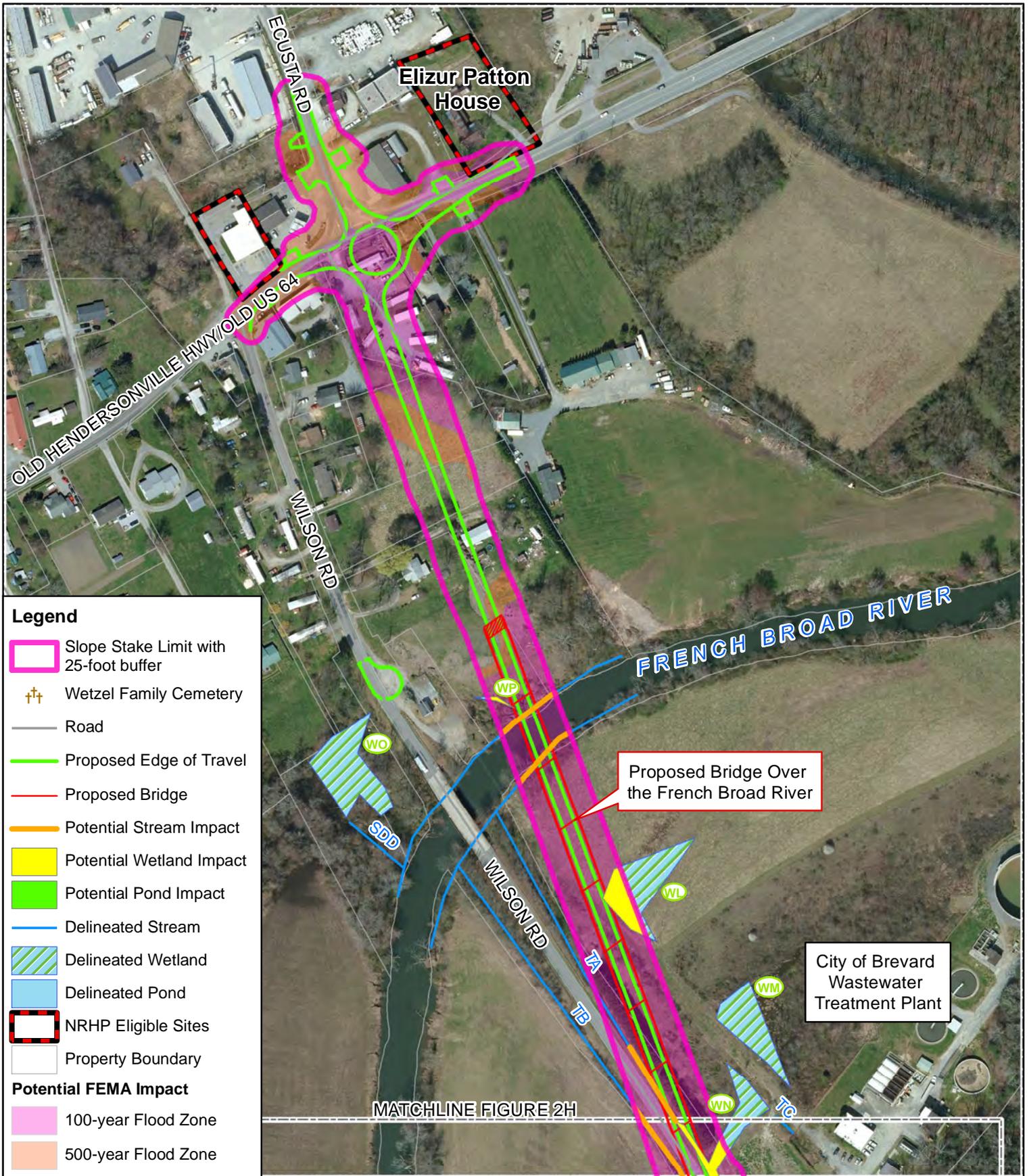
**Legend**

-  Slope Stake Limit with 25-foot buffer
-  Wetzel Family Cemetery
-  Road
-  Proposed Edge of Travel
-  Proposed Bridge
-  Potential Stream Impact
-  Potential Wetland Impact
-  Potential Pond Impact
-  Delineated Stream
-  Delineated Wetland
-  Delineated Pond
-  NRHP Eligible Sites
-  Property Boundary
- Potential FEMA Impact**
-  100-year Flood Zone
-  500-year Flood Zone



Data Source: HNTB, Transylvania Co GIS, NCDOT  
HNTB, November 2021

**FIGURE 2H**  
**POTENTIAL IMPACTS TO**  
**PREFERRED ALTERNATIVE**  
**STIP Project No. R-5763**  
**Improvements to Wilson Road from US 276**  
**to Old US 64/Old Hendersonville Hwy**  
**Brevard, Transylvania County**



**FIGURE 2I**  
 POTENTIAL IMPACTS TO PREFERRED ALTERNATIVE  
 STIP Project No. R-5763  
 Improvements to Wilson Road from US 276  
 to Old US 64/Old Hendersonville Hwy  
 Brevard, Transylvania County

Data Source: HNTB, Transylvania Co GIS, NCDOT  
 HNTB, November 2021

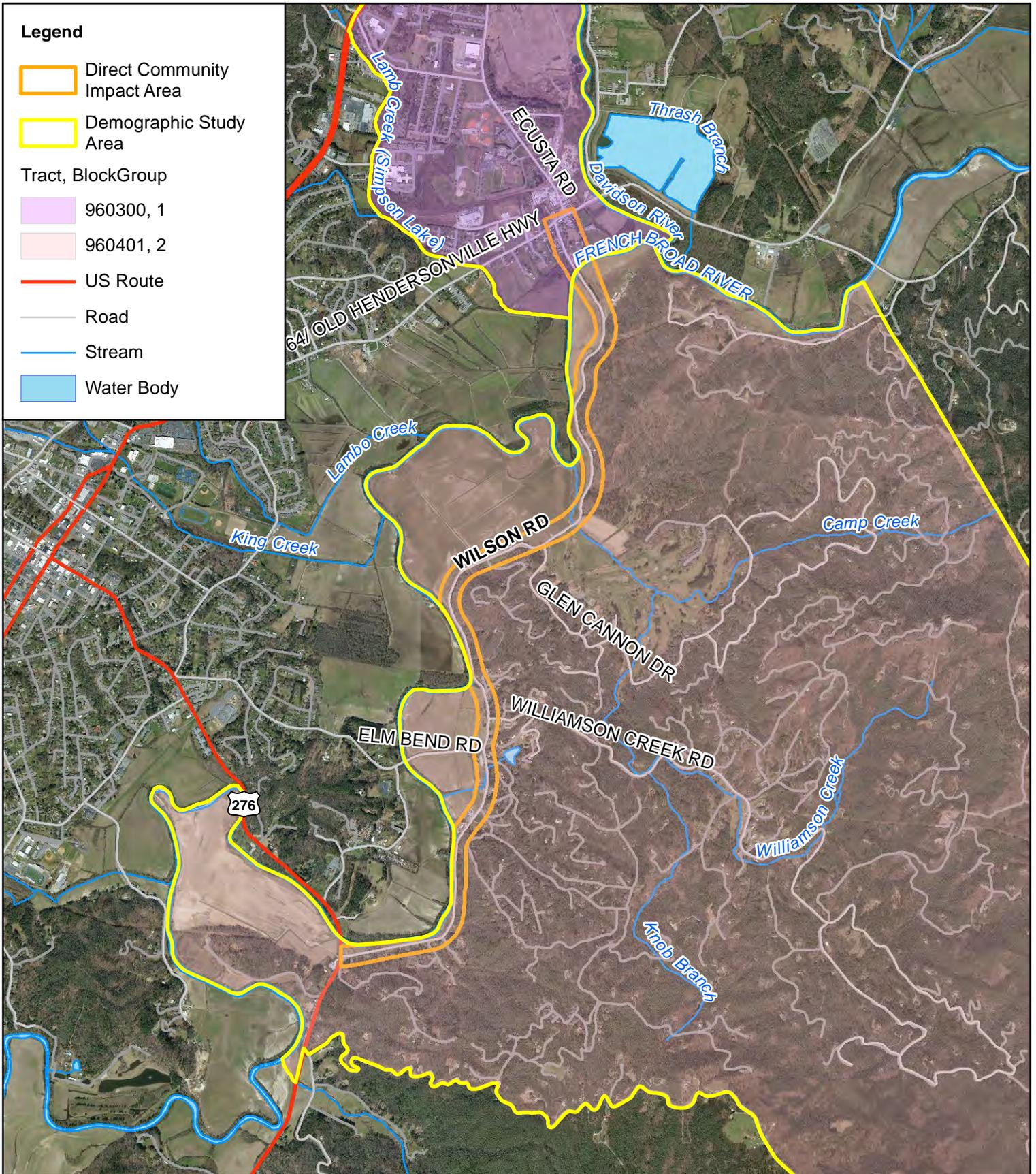
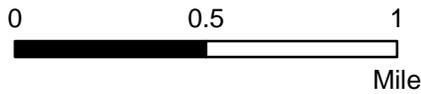


FIGURE 3

DEMOGRAPHIC STUDY AREA & DIRECT COMMUNITY IMPACT AREA

STIP Project No. R-5763

Improvements to Wilson Road from US 276 to Old US 64/Old Hendersonville Hwy Brevard, Transylvania County



APPENDIX A  
Agency Correspondence



18-01-0032

**Brief description of review activities, results of review, and conclusions:**

TRC Environmental Corporation (TRC) conducted an intensive archaeological survey and evaluation for the proposed upgrade of SR 1540 (Wilson Road) from SR 1504 (Old US 64) to US 276 in Transylvania County, North Carolina. The fieldwork was carried out from August 13 to September 14, 2018 and was directed by Michael Nelson, with the assistance of field technicians Rachael Denton, Tommy Garrow, Sterling Howard, Erin Warren, and Isaac Webb. An NCDOT review, supplemented by research performed by TRC in the North Carolina state site files, indicated that there had been no previous systematic archaeological investigations and no sites previously recorded within the APE for archaeology, although several sites have been recorded adjacent to the APE.

The survey identified 12 previously unidentified archaeological resources within the project APE, including four sites (31TV1089–31TV1092), a historic period family cemetery (31TV1093), and seven isolated finds (31TV1094–31TV1100) (Table 1; Figures 1–6). Three of the sites (31TV1089, 31TV1091, and 31TV1092) and the cemetery (31TV1093) likely extend outside the current project APE. Sites 31TV1089–31TV1091 are multi-component sites that are represented by both prehistoric lithic and ceramic artifacts as well as 19<sup>th</sup> to 20<sup>th</sup> century period historic artifacts, while site 31TV1092 is a low-density site with both prehistoric and historic period ceramic artifacts. The small family cemetery, 31TV1093, contains at least 14 graves marked by fieldstones, one of which also has a modern marker. Sites 31TV1094, 31TV1095, 31TV1097 and 31TV1098 are all isolated occurrences of non-diagnostic lithic debitage, while sites 31TV1096, and 31TV1099 are represented by 19<sup>th</sup> to 20<sup>th</sup> century artifacts recovered from single shovel test locations. Finally, site 31TV1100 is identified by a single prehistoric ceramic sherd and may be associated with previously recorded site 31TV610, which is mapped north and west of the project corridor. All 12 of the identified resources are recommended not eligible for the National Register of Historic Places (NRHP) under all four NRHP criteria as expressed within the project APE, although the historic cemetery (31TV1093) is protected by North Carolina state statutes and should be avoided. In addition, in the event that the APE changes, additional survey and/or site evaluation may be necessary to further investigate sites 31TV1089, 31TV1090, 31TV1091, and/or 31TV1092.

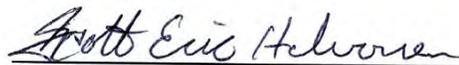
Several small portions of the APE could not be surveyed due to lack of landowner permission, as shown in Figures 3–6. Survey is recommended for the small unsurveyed area along the east side of site 31TV1089 (Figure 3) if it is to be affected by the project, but no additional attempts to survey the remaining unsurveyed areas are recommended.

**SUPPORT DOCUMENTATION**

See attached:  Map(s)     Previous Survey Info     Photos     Correspondence

Other: **Cultural Review**

Signed



NCDOT ARCHAEOLOGIST

1-3-2019

Date

Proposed Improvements to Wilson Road (SR 1540)  
From US 276 to SR 1504 (Old US 64/Old Hendersonville Highway)  
Transylvania County

Merger Screening

STIP Project No. R-5763

WBS. 44638.1.1

## Project Description

The North Carolina Department of Transportation (NCDOT) proposes to improve SR 1540 (Wilson Road) from US 276 to SR 1504 (Old US 64/Old Hendersonville Highway), approximately 3.7 miles, as shown on Figure 1. The project is included in the State Transportation Improvement Program (STIP) as project number R-5763. The project proposes to upgrade Wilson Road to current Major Collector design standards and move it out of the 50-year floodplain associated with the French Broad River. The project will improve the safety of Wilson Road as well as re-align the Wilson Road intersection with Old US 64/Old Hendersonville Highway to form a four-leg intersection with SR 1512 (Ecusta Road).

Within the project study area, Wilson Road is a two-lane facility connecting US 276 and Old US 64/Old Hendersonville Highway, approximately 3.7 miles. The posted speed limit is 40 miles per hour (mph). The Land of Sky RPO classifies Wilson Road as a Major Collector. Wilson Road is located east of Brevard and serves as a bypass around the city in conjunction with Ecusta Road. Wilson Road is included as part of each of the six bicycle routes provided by the City of Brevard. Transylvania County has designated Old US 64/Old Hendersonville Highway as Bicycle Route 1.

## Estimated Costs

Cost estimates are provided from the Current STIP (May 2018) and the Feasibility Study (January 2017). The costs from the Feasibility Study were estimated based on a conceptual design for the proposed improvements. NCDOT Right of Way provided the estimated right of way costs.

**Table 1. Estimated Costs for R-5763**

	STIP <sup>1</sup>	Feasibility Study <sup>2</sup>
<b>Right of Way</b>	\$270,000	\$5,100,000
<b>Utilities</b>	\$100,000	\$1,800,000
<b>Construction</b>	\$9,400,000	\$27,000,000
<b>Total</b>	\$9,770,000	\$33,900,000

<sup>1</sup>Current STIP (May 2018)

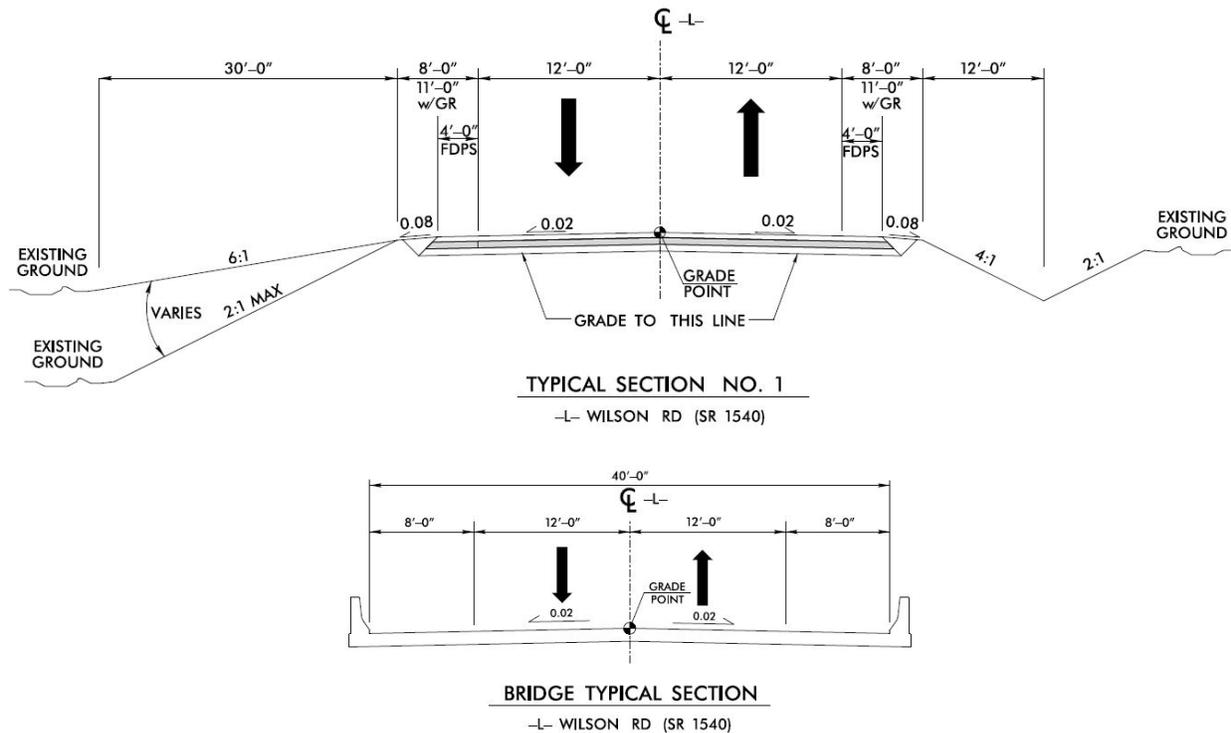
<sup>2</sup>Feasibility Study (January 2017)

## Project History

A Feasibility Study, finalized in January 2017, analyzed three possible alternatives for the subject project. The first alternative would make minor upgrades and improvements using NCDOT's Resurfacing,

Restoration, and Rehabilitation (3R) guidelines. The second alternative proposed upgrading Wilson Road to Major Collector design standards. The third alternative proposed to upgrade Wilson Road to Principal Arterial (US Route) design standards.

The first alternative did not meet the purpose and need and the number of relocations and public opposition to the third alternative ruled it out as well. NCDOT chose to move forward to the project-level with the second alternative. This alternative will correct the horizontal curvature by increasing the radii to meet minimum AASHTO design standards. In addition, the vertical design would be improved to meet minimum design standards and move Wilson Road out of the 50-year floodplain. The bridges over Williamson Creek and the French Broad River would be replaced on new alignment. Finally, this alternative will add paved shoulders and increase the design speed of the road to 45 mph.



## Purpose and Need

Sections of Wilson Road flood during 10-year and 50-year flood events, making the road impassable to residents, those traveling to or from businesses, and to the City of Brevard's wastewater treatment plant (WWTP). The purpose of this project is to reduce over-topping of the road by the French Broad River during flood events and improve the facility to current design standards.

In addition, the project exceeds the statewide crash rate for similar facilities. Improving the facility by raising it to Major Collector design standards and realigning the Wilson Road/Ecusta Road and Old US 64/Old Hendersonville Highway intersection to a four-leg intersection will meet the secondary purpose of improved safety of the roadway.

## Environmental Documentation

A Combined State Environmental Assessment/Finding of No Significant Impact will be prepared for the subject project. A build and no-build alternative will be evaluated. A completion date of November 2018 is expected.

## Hazardous Material Sites

According to NC Department of Environmental Quality (DEQ) Geographic Information System (GIS) data, one underground storage tank is located at the One Stop gas station at the corner of Ecusta Road and Old US 64/Old Hendersonville Highway. The UST is listed as low risk. The WWTP accessed from Wilson Road has a major NPDES permit to discharge into the French Broad River downstream of the project.

## Community Facilities

There are no schools, churches, cemeteries, parks or greenways within the project study area. There is a post office located near the intersection of Wilson Road and Old US 64/Old Hendersonville Highway at 1 Old Hendersonville Highway, Pisgah Forest.

As previously noted, the City of Brevard WWTP is located at 3226 Wilson Road. The WWTP is setback from the road and should not be impacted by the realignment of Wilson Road to intersect with Ecusta Road.

In addition, a daycare center, Nana's and Mommy's Too, is located at 1131 Wilson Road. The center is partnered with the Subsidized Child Care Program (Head Start) for Transylvania County.

## Jurisdictional Resources

A field JD visit is scheduled for July 2018. The following resources are based on the WEX file submitted with the NRTR (Three Oaks, 2018).

### Streams

Table 2 lists potential jurisdictional streams within the project study area. No impacts are anticipated where Wilson Road runs parallel to the French Broad River. Impacts included in Table 3 are based on functional design slope stake limits plus a 40-foot buffer. French Broad River impacts are only included at the proposed river crossing.

**Table 2. Characteristics of Potential Jurisdictional Streams and Potential Impacts**

Map ID	Length (ft.)	Classification	Compensatory Mitigation Required	River Basin Buffer	Impacts (ft)
Cateechee Branch	661	Perennial	Yes	Not Required	
French Broad River	7,884	Perennial	Yes	Not Required	179
Williamson Creek	495	Perennial	Yes	Not Required	279
SA-I	238	Intermittent	Undetermined	Not Required	78
SA-P	210	Perennial	Yes	Not Required	196
SB	195	Perennial	Yes	Not Required	62
SC	20	Perennial	Yes	Not Required	0
SD-I	79	Intermittent	Undetermined	Not Required	65
SD-P	77	Perennial	Yes	Not Required	77
SE-I	143	Intermittent	Undetermined	Not Required	64
SE-P	40	Perennial	Yes	Not Required	40
SF	140	Perennial	Yes	Not Required	0
SG	285	Perennial	Yes	Not Required	126
SH	231	Perennial	Yes	Not Required	101
SI	263	Perennial	Yes	Not Required	111
SJ	5	Perennial	Yes	Not Required	0
SK	128	Perennial	Yes	Not Required	128
SL	234	Perennial	Yes	Not Required	102

**Table 2. Characteristics of Potential Jurisdictional Streams and Potential Impacts**

Map ID	Length (ft.)	Classification	Compensatory Mitigation Required	River Basin Buffer	Impacts (ft)
SM	81	Perennial	Yes	Not Required	28
SN	19	Perennial	Yes	Not Required	0
SO	65	Perennial	Yes	Not Required	27
SP	363	Perennial	Yes	Not Required	86
SQ	65	Intermittent	Undetermined	Not Required	65
SR	414	Perennial	Yes	Not Required	230
SS	186	Perennial	Yes	Not Required	84
ST	54	Intermittent	Undetermined	Not Required	0
SU	224	Perennial	Yes	Not Required	191
SV	114	Perennial	Yes	Not Required	0
SW	183	Perennial	Yes	Not Required	90
SX	323	Perennial	Yes	Not Required	120
SY	244	Perennial	Yes	Not Required	155
SZ	426	Perennial	Yes	Not Required	165
SDD	138	Perennial	Yes	Not Required	0
SEE	12	Perennial	Yes	Not Required	12
<b>Total</b>	<b>14,239</b>			<b>Total</b>	<b>3,322</b>

Note: There are no streams SAA-SCC.

<sup>1</sup>Impacts based on functional design slope stake limits plus 40 feet

### Wetlands

Table 3 lists potential jurisdictional wetlands and their characteristics within the project study area as well as potential impacts based on functional design slope stake limits plus 40 feet.

**Table 3. Characteristics of Potential Jurisdictional Wetlands and Potential Impacts**

Map ID	NCWAM Classification	NCWAM Rating	Hydrologic Classification	Area (ac.)	Impact (ac.)
	Headwater	High		0.04	0.04
		High		0.02	0.02
WC	Headwater Forest	High	Riparian	0.02	0.02
WD	Headwater Forest	High	Riparian	0.01	0
WE	Headwater Forest	Low	Riparian	0.03	0.03
WF	Floodplain Pool	High	Riparian	0.13	0.08
WG	Headwater Forest	Low	Riparian	0.002	0
WH	Seep	High	Non-riparian	0.0001	<0.01
WI	Headwater Forest	Low	Riparian	0.03	0
WJ	Headwater Forest	High	Riparian	0.004	0
WK	Seep	Medium	Non-riparian	0.02	<0.01
WL	Floodplain Pool	Low	Riparian	0.31	0.16
WM	Bottomland Hardwood Forest	Low	Riparian	0.22	0
WN	Bottomland Hardwood Forest	Low	Riparian	0.27	0.16

Map ID	NCWAM Classification	NCWAM Rating	Hydrologic Classification	Area (ac.)	Impact (ac.)
WO	Bottomland Hardwood Forest	Low	Riparian	0.34	0
WP	Floodplain Pool	Low	Riparian	0.01	0.01
			<b>Total</b>	<b>1.46</b>	<b>0.5</b>

<sup>1</sup>Impacts based on functional design slope stake limits plus 40 feet

### Surface Waters

Five surface waters (i.e., ponds and tributaries) were identified in the study area and are listed in Table 4 along with potential impacts from the project.

**Table 4. Surface waters in the study area and potential impacts**

Surface Water	Jurisdictional	Map ID of Connection	Area (ac)/ Length (ft)	Impact
TA	Yes	French Broad River	693 ft	420 ft
TB	Yes	French Broad River	1,079 ft	553 ft
TC	Yes	WN/French Broad River	48 ft	0
PA	Yes	SL/SM	0.18 ac	0.03 ac
PB	Yes	SL/SM	0.40 ac	0.12 ac

### Floodplains

Because Wilson Road is currently in the 50-year floodplain, there will inherently be impacts to the floodplain. These are shown in Table 5.

**Table 5. Potential Floodplain Impacts**

FEMA Floodplain	Impact (ac)
100-year Floodplain	39.7
500-year Floodplain	7.4

### Regulations

Williamson Creek and an unnamed tributary to Williamson Creek (Stream SV) are identified as trout waters by NC Department of Water Resources (DWR). Therefore, a 25-foot year-round buffer will be required for these two streams. NC Wildlife Resources Commission (NCWRC) does not list any streams in the project area as trout waters; therefore, no in-stream trout moratoria and design standards are required. There are no buffer rules in place for the French Broad River.

### Terrestrial Communities

The project study area is predominantly pastoral with the French Broad River with farmland along the western side of the road and houses and subdivisions on the eastern side. Along the eastern side houses are generally located upslope of the floodplain. Land use is predominantly maintained/disturbed with some forest dispersed throughout.

### Threatened and Endangered Species

As of March 22, 2018, the US Fish and Wildlife Service lists twelve species as threatened or endangered in Transylvania County. These species are listed in Table 6.

**Table 6. Threatened and Endangered Species in Transylvania County**

Scientific Name	Common Name	Federal Status	Habitat Present	Biological Conclusion
<i>Glyptemys muhlenbergii</i>	Bog turtle	T(S/A)	No	Not Required
<i>Glaucomys sabrinus coloratus</i>	Carolina northern flying squirrel	E	No	No Effect
<i>Myotis grisescens</i>	Gray bat	E	Yes	Unresolved
<i>Myotis septentrionalis</i>	Northern long-eared bat	T	Yes	Unresolved
<i>Alasmidonta raveneliana</i>	Appalachian elktoe	E	Yes	Unresolved
<i>Bombus affinis</i> *	Rusty-patched bumble bee	E	Yes	Not Required
<i>Sarracenia rubra ssp. jonesii</i>	Mountain sweet pitcherplant	E	No	No Effect
<i>Isotria medeoloides</i>	Small whorled pogonia	T	Yes	Unresolved
<i>Geum radiatum</i>	Spreading avens	E	No	No Effect
<i>Helonias bullata</i>	Swamp pink	T	No	No Effect
<i>Spiraea virginiana</i>	Virginia spiraea	T	Yes	Unresolved
<i>Gymnoderma lineare</i>	Rock gnome lichen	E	No	No Effect

E – Endangered; T – Threatened; T(S/A) - Threatened due to similarity of appearance

\*-Historic record (the species was last observed in the county more than 50 years ago)

Field surveys for the gray bat, northern long-eared bat, Appalachian elktoe, small whorled pogonia, and Virginia spiraea will be conducted Summer 2018.

## Permits

A US Army Corps of Engineers (USACE) Section 404 permit and corresponding NCDWR 401 Water Quality Certification will be required. Permit and certification type are at the discretion of the respective agency.

## Cultural Resources

This project is being reviewed by NCDOT's Historic Architecture and Archaeology staff under a Programmatic Agreement with the State Historic Preservation Office (SHPO) in accordance with Section 106 of the National Historic Preservation Act. Based on staff review this project requires surveys for both historic architecture and archaeology. It is anticipated that one or more of the approximately 22 structures being surveyed will be determined eligible for the National Register of Historic Places.

## Relocations

There are several homes and businesses within the project study area along Wilson Road. Relocations will be determined following roadway design. However, a mobile home park, consisting of approximately seven homes, at the northern terminus of the project will be relocated.

## Environmental Justice

A Community Impact Assessment (CIA) and Indirect and Cumulative Evaluation Screening (sICE) were completed for the subject project. A notable presence of low-income populations meeting the criteria of Environmental Justice and populations protected by Title VI and related statutes are within the study

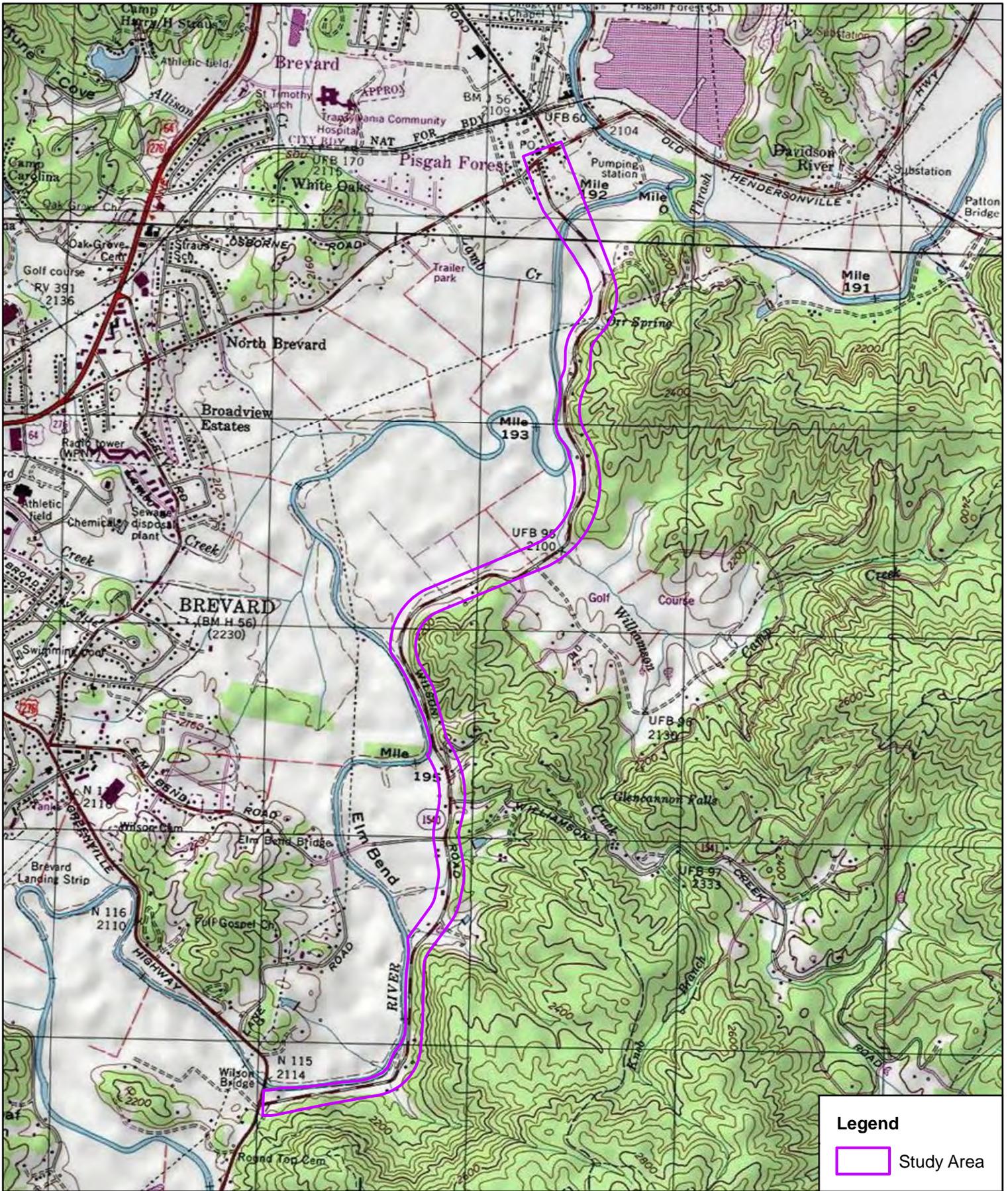
area. Notably adverse community impacts are anticipated with this project and these effects appear to affect Title VI populations notably more than the general population. Benefits and burdens resulting from the project are not anticipated to be equitably distributed throughout the community. Disparate impacts are anticipated under Title VI.

## Summary

Table 7 ranks the overall potential impacts for STIP Project No. R-5763.

**Table 7. Summary of Potential Impacts**

<b>Impact Type</b>	<b>None</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
Hazardous Materials		X		
Community Facilities		X		
Jurisdictional Streams				X
Jurisdictional Wetlands		X		
Jurisdictional Surface Waters		X		
Federally Protected Species			X	
Floodplains				X
Cultural Resources			X	
Relocations				X
Buffers (Trout Waters)		X		



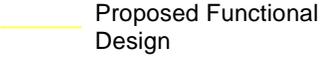
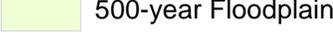
**Project Location**  
 STIP Project No R-5763  
 Improvements to Wilson Road from US 276  
 to Old US 64/ Old Hendersonville Highway  
 Brevard, Transylvania County

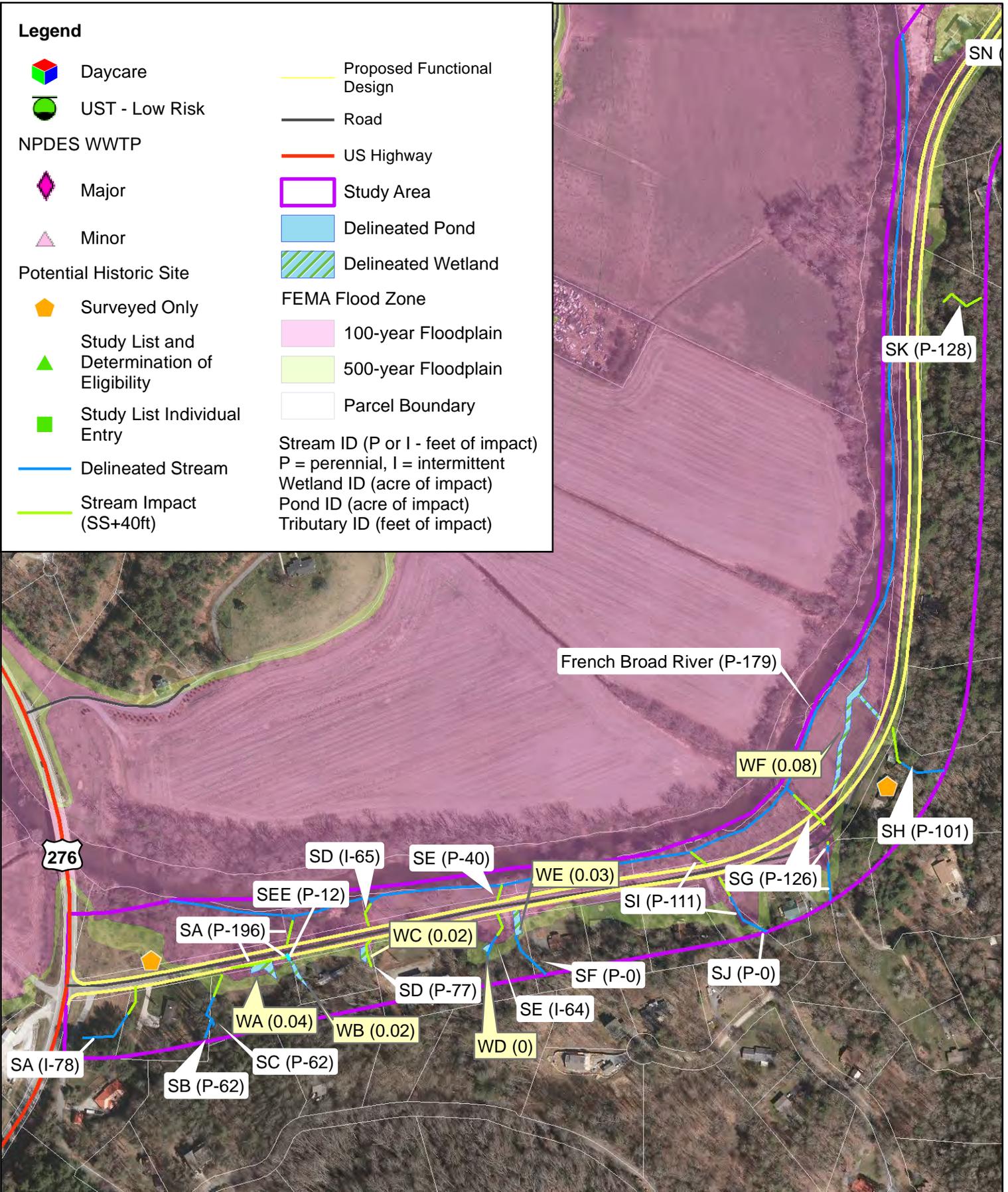
**FIGURE 1**

0 1,000 2,000 4,000 Feet

Source: USGS 7.5-minute Topographical Quadrangle: Brevard

**Legend**

-  Daycare
-  UST - Low Risk
- NPDES WWTP**
-  Major
-  Minor
- Potential Historic Site**
-  Surveyed Only
-  Study List and Determination of Eligibility
-  Study List Individual Entry
-  Delineated Stream
-  Stream Impact (SS+40ft)
-  Proposed Functional Design
-  Road
-  US Highway
-  Study Area
-  Delineated Pond
-  Delineated Wetland
- FEMA Flood Zone**
-  100-year Floodplain
-  500-year Floodplain
-  Parcel Boundary
- Stream ID (P or I - feet of impact)  
P = perennial, I = intermittent
- Wetland ID (acre of impact)
- Pond ID (acre of impact)
- Tributary ID (feet of impact)



**Environmental Features**

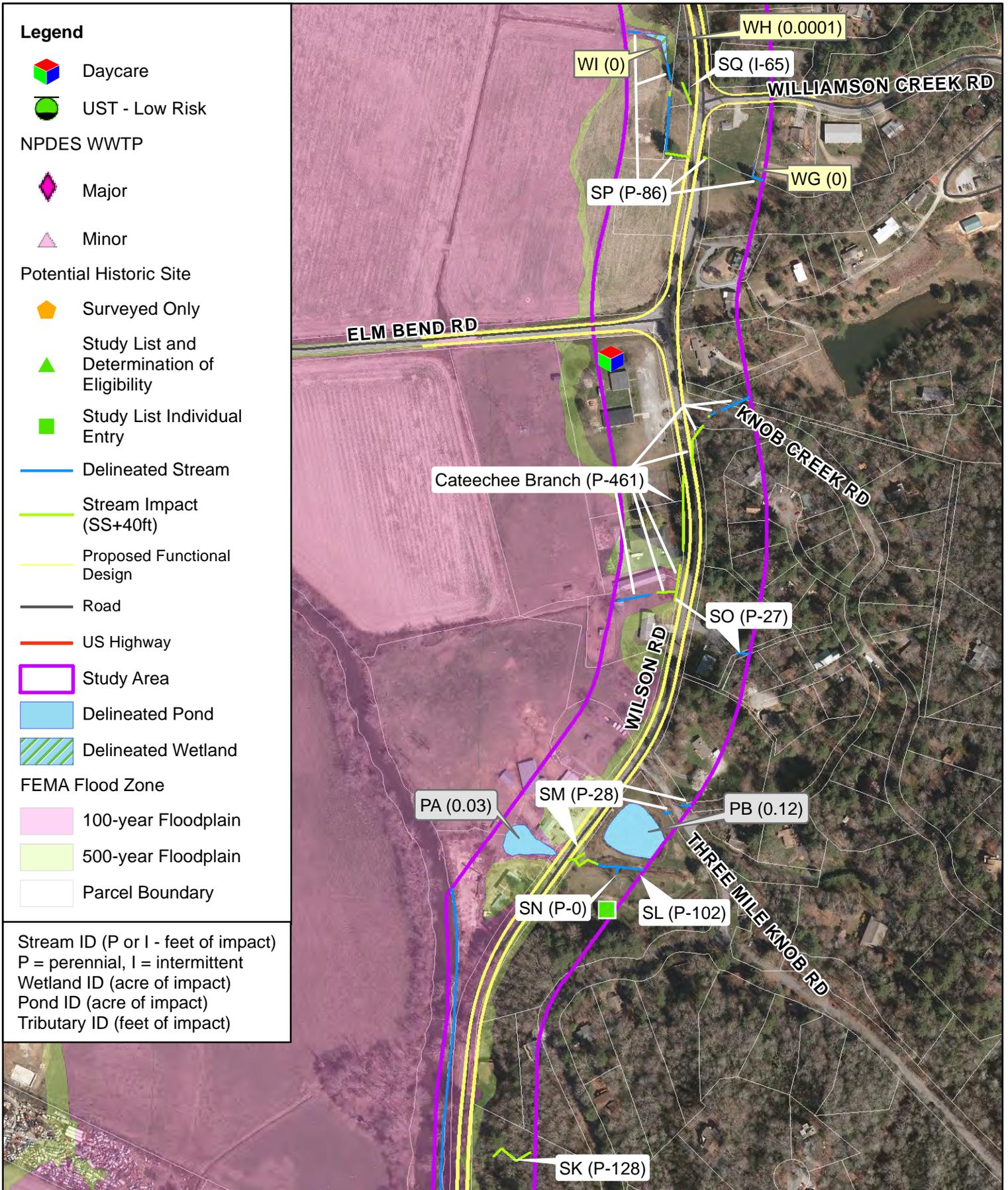
STIP Project No R-5763

Improvements to Wilson Road from US 276 to Old US 64/ Old Hendersonville Highway  
Brevard, Transylvania County

FIGURE

**2A**

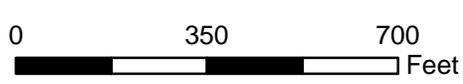




**Legend**

-  Daycare
-  UST - Low Risk
- NPDES WWTP**
-  Major
-  Minor
- Potential Historic Site**
-  Surveyed Only
-  Study List and Determination of Eligibility
-  Study List Individual Entry
-  Delineated Stream
-  Stream Impact (SS+40ft)
-  Proposed Functional Design
-  Road
-  US Highway
-  Study Area
-  Delineated Pond
-  Delineated Wetland
- FEMA Flood Zone**
-  100-year Floodplain
-  500-year Floodplain
-  Parcel Boundary

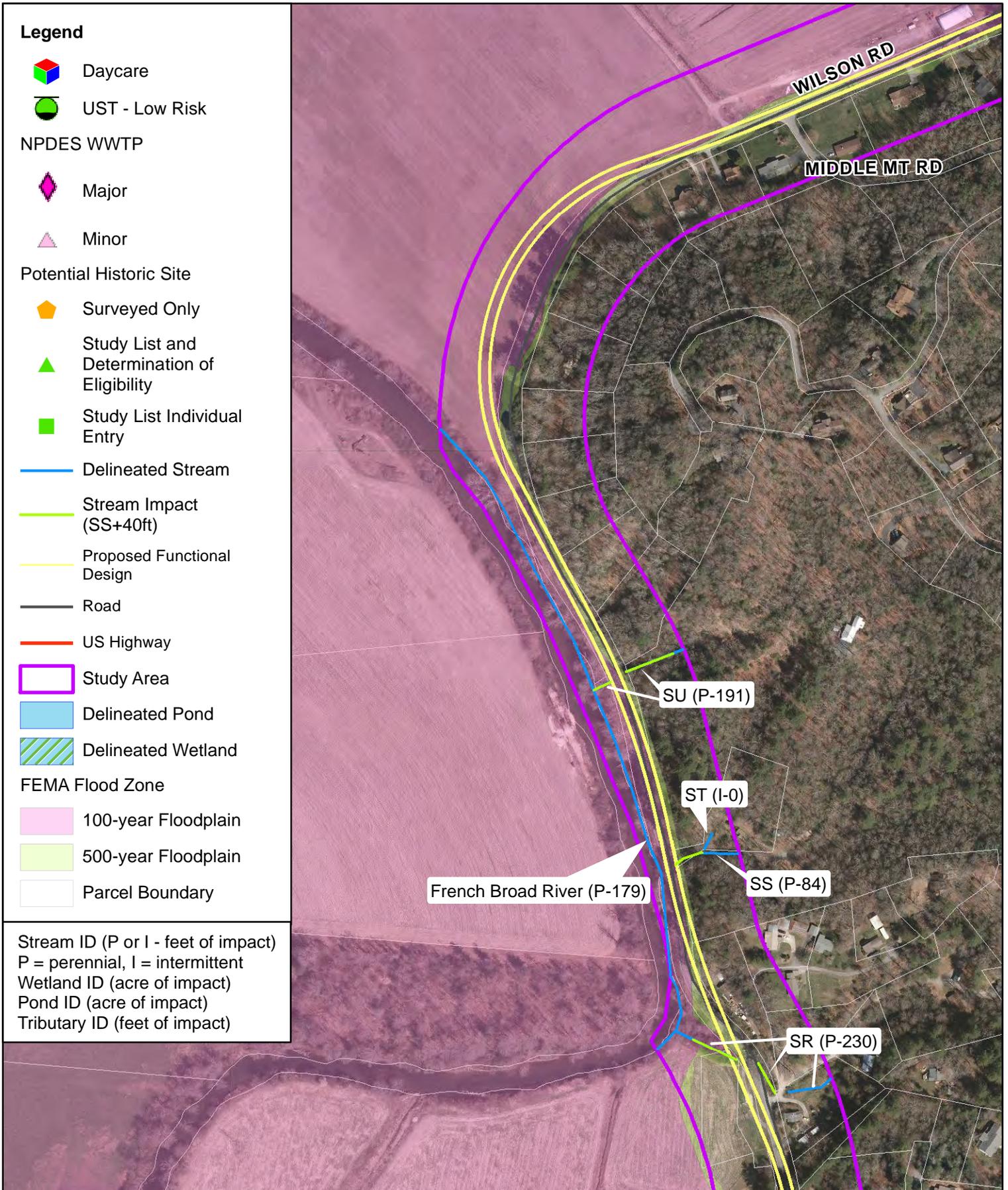
Stream ID (P or I - feet of impact)  
 P = perennial, I = intermittent  
 Wetland ID (acre of impact)  
 Pond ID (acre of impact)  
 Tributary ID (feet of impact)



**Environmental Features**

STIP Project No R-5763  
 Improvements to Wilson Road from US 276  
 to Old US 64/ Old Hendersonville Highway  
 Brevard, Transylvania County

**FIGURE 2B**



**Legend**

-  Daycare
-  UST - Low Risk
- NPDES WWTP**
-  Major
-  Minor
- Potential Historic Site**
-  Surveyed Only
-  Study List and Determination of Eligibility
-  Study List Individual Entry
-  Delineated Stream
-  Stream Impact (SS+40ft)
-  Proposed Functional Design
-  Road
-  US Highway
-  Study Area
-  Delineated Pond
-  Delineated Wetland
- FEMA Flood Zone**
-  100-year Floodplain
-  500-year Floodplain
-  Parcel Boundary

Stream ID (P or I - feet of impact)  
 P = perennial, I = intermittent  
 Wetland ID (acre of impact)  
 Pond ID (acre of impact)  
 Tributary ID (feet of impact)

French Broad River (P-179)

SU (P-191)

ST (I-0)

SS (P-84)

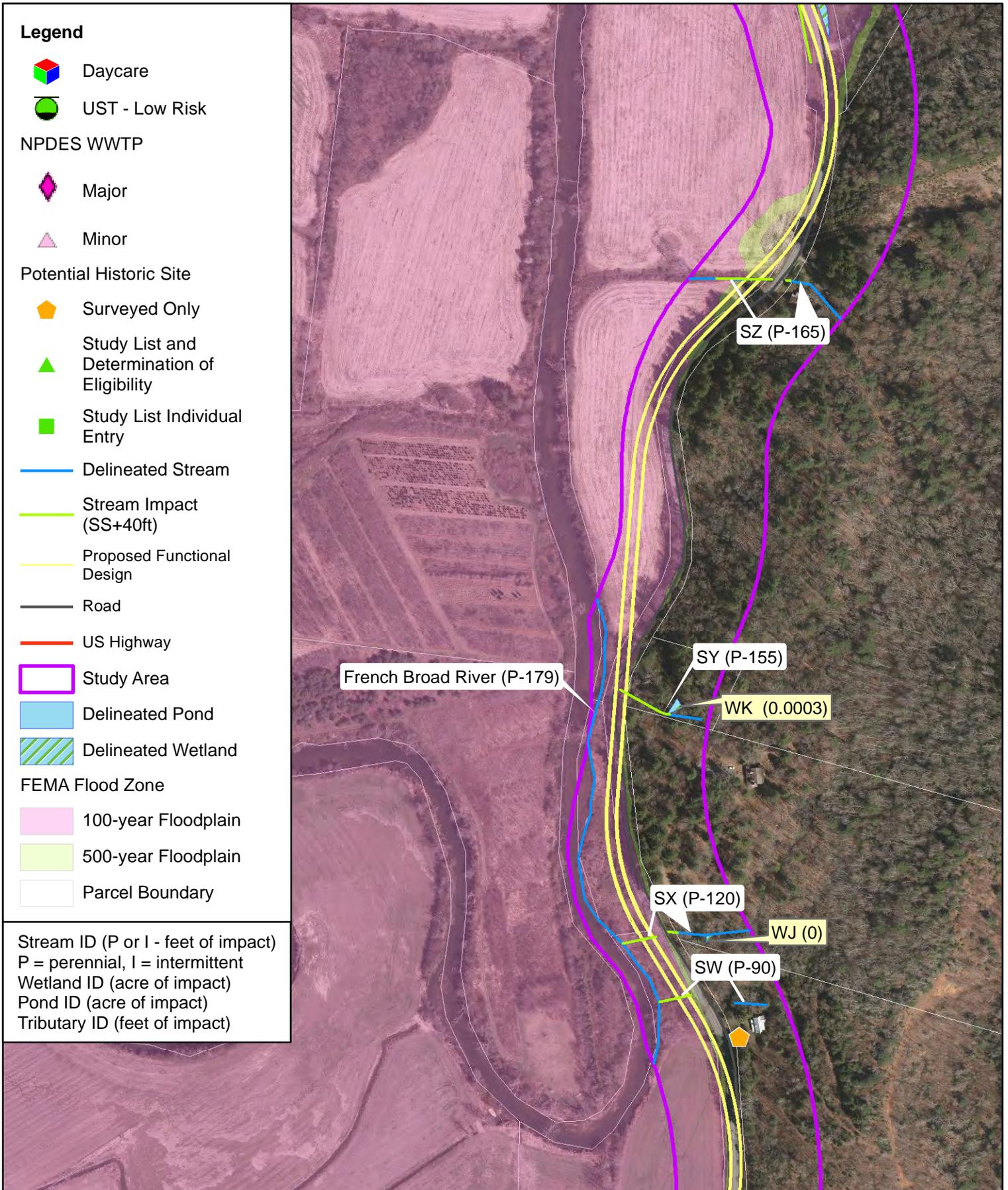
SR (P-230)



**Environmental Features**

STIP Project No R-5763  
 Improvements to Wilson Road from US 276  
 to Old US 64/ Old Hendersonville Highway  
 Brevard, Transylvania County

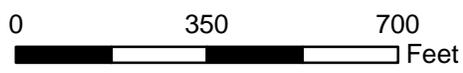
FIGURE  
**2C**



**Legend**

-  Daycare
-  UST - Low Risk
- NPDES WWTP**
-  Major
-  Minor
- Potential Historic Site**
-  Surveyed Only
-  Study List and Determination of Eligibility
-  Study List Individual Entry
-  Delineated Stream
-  Stream Impact (SS+40ft)
-  Proposed Functional Design
-  Road
-  US Highway
-  Study Area
-  Delineated Pond
-  Delineated Wetland
- FEMA Flood Zone**
-  100-year Floodplain
-  500-year Floodplain
-  Parcel Boundary

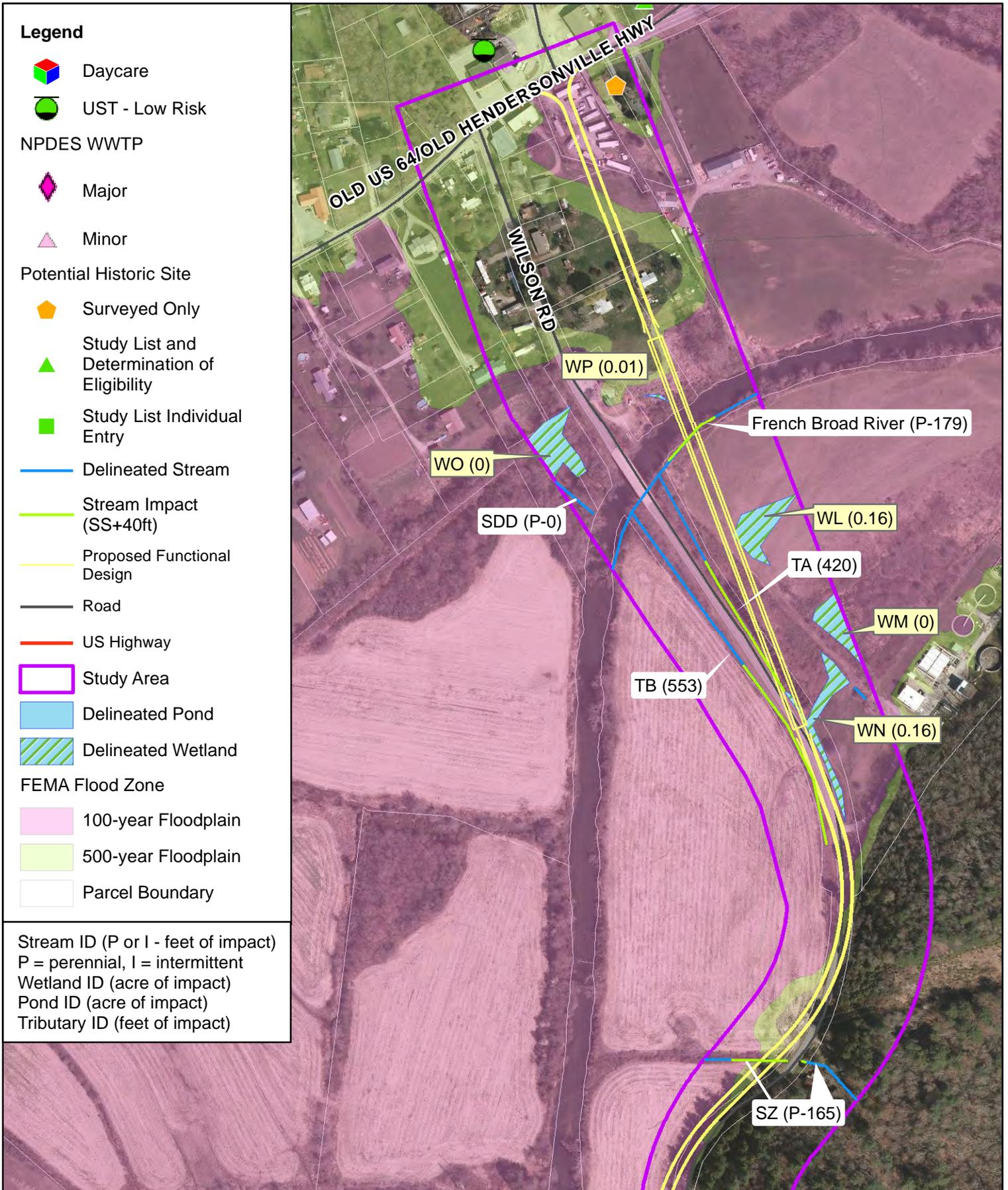
Stream ID (P or I - feet of impact)  
 P = perennial, I = intermittent  
 Wetland ID (acre of impact)  
 Pond ID (acre of impact)  
 Tributary ID (feet of impact)



**Environmental Features**

STIP Project No R-5763  
 Improvements to Wilson Road from US 276  
 to Old US 64/ Old Hendersonville Highway  
 Brevard, Transylvania County

FIGURE  
**2D**



**Legend**

-  Daycare
-  UST - Low Risk
- NPDES WWTP**
-  Major
-  Minor
- Potential Historic Site**
-  Surveyed Only
-  Study List and Determination of Eligibility
-  Study List Individual Entry
-  Delineated Stream
-  Stream Impact (SS+40ft)
-  Proposed Functional Design
-  Road
-  US Highway
-  Study Area
-  Delineated Pond
-  Delineated Wetland
- FEMA Flood Zone**
-  100-year Floodplain
-  500-year Floodplain
-  Parcel Boundary

Stream ID (P or I - feet of impact)  
 P = perennial, I = intermittent  
 Wetland ID (acre of impact)  
 Pond ID (acre of impact)  
 Tributary ID (feet of impact)



**Environmental Features**

STIP Project No R-5763  
 Improvements to Wilson Road from US 276  
 to Old US 64/ Old Hendersonville Highway  
 Brevard, Transylvania County

FIGURE  
**2E**

**From:** [Amschler, Crystal C CIV USARMY CESAW \(US\)](#)  
**To:** [McHenry, David G](#); [Barnett, Kevin](#); [Austin, Wanda H](#)  
**Cc:** [Kat Bukowy](#); [Miller, Jerome S](#)  
**Subject:** RE: [External] R-5763 Merger Screening Packet  
**Date:** Wednesday, February 5, 2020 4:29:44 PM  
**Attachments:** [image001.png](#)

---

Dave and Wanda,

I've reviewed the screening package for this project and I would recommend this project for merger for several reasons include the high amount of impacts (many of which are very close together), the competing resources (the high amount of potential impacts to waters of the US, the presence of endangered species, the potential for historic resources, the potential for several residential relocations and environmental justice impacts) etc.

Based on review of the screening document I also noted a few things that you should consider as you move forward in the process and once you begin the EA document.

- 1) The document indicates that the project propose is to "upgrade Wilson Road to current Major Collector design standards and move it out of the 50-year floodplain associated with the French Broad River." Similarly, the document notes the project purpose in another section as "to reduce over-topping of the road by the French Broad River during flood events and improve the facility to current design standards" with a secondary purpose to "improve safety of the roadway" to address the high crash rate. The document further indicates that DOT would like to improve the road to a 45 mph speed limit. My understanding is the basic goal of the project is to address the high crash rate, upgrade the road to meet standards for a Major Collector design and address flooding. I would just ask that you make sure the purpose is consolidated to clearly state the things that this project needs to achieve (the safety aspects/road standard aspects/flooding aspects) and to define the purpose to allow for measurable standards that can be used to compare and evaluate alternatives and clearly show which alternatives meet and don't meet the project purpose. I'm happy to discuss this with you further as we move forward either by teleconference or email. I would suggest that we discuss the project purpose or at least be provided with the draft CP1 document prior to scheduling the CP1 meeting so we can ensure a smooth process. I would also note that if the 45 mph speed limit is part of the design criteria for the Major Collector, it should be defined as such in the project purpose or performance criteria, otherwise, a 45 mph speed limit would not be a valid criteria to drop or keep an alternative.
- 2) The document indicates that the third alternative was dropped due to public concerns and number of relocations and that the build and no-build alternative will be evaluated in the EA. You should be aware that all alternatives that have been developed should be addressed in the EA and discussed in the merger process. If an alternative doesn't meet the project purpose or need or is not considered practicable, then the EA/merger information should provide information justifying those decisions. Any alternative that meets the project purpose and is practicable should be evaluated in the EA and will need to be included as alternatives in the merger process until the appropriate point in the process until they can be eliminated. Alternatives that meet the project purpose and need and are practicable will typically be considered through the CP3 concurrence point where alternatives with higher

environmental impacts are eliminated in favor of the LEDPA. You should specifically be aware that we would typically not eliminate an alternative due to public opposition or relocations if that project meets the purpose and need and/or is practicable until it has been evaluated through the CP3 process.

If you have any questions or would like to discuss anything in this email further, feel free to give me a call.

Crystal C. Amschler  
Project Manager  
Asheville Regulatory  
Field Office  
151 Patton Avenue,  
Room 208  
Asheville, NC 28403  
(828)-271-7980 Ext 4231

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---

**From:** McHenry, David G [mailto:dgmchenry@ncdot.gov]  
**Sent:** Tuesday, September 4, 2018 8:47 AM  
**To:** Amschler, Crystal C CIV USARMY CESAW (US) <Crystal.C.Amschler@usace.army.mil>; Barnett, Kevin <kevin.barnett@ncdenr.gov>  
**Cc:** Kat Bukowy <kbukowy@HNTB.com>; Miller, Jerome S <jsmiller3@ncdot.gov>  
**Subject:** [Non-DoD Source] RE: [External] R-5763 Merger Screening Packet

Crystal and Kevin,

When you have the opportunity, we would appreciate your thoughts on this project concerning merger. Please advise if you have any questions or need further information or clarification.

Thanks  
Dave

---

**From:** Kat Bukowy [mailto:kbukowy@HNTB.com]  
**Sent:** Friday, July 13, 2018 8:05 AM  
**To:** Amschler, Crystal C CIV USARMY CESAW (US) <Crystal.C.Amschler@usace.army.mil>; McHenry, David G <dgmchenry@ncdot.gov>; Nathan Howell <nathan.howell@threeoaksengineering.com>; James Mason <james.mason@threeoaksengineering.com>  
**Cc:** Paul Petrich <PPetrich@HNTB.com>  
**Subject:** [External] R-5763 Merger Screening Packet

**CAUTION:** External email. Do not click links or open attachments unless verified. Send all suspicious email as an

attachment to [Report Spam](#).

Good morning,

Please see the attached Merger Screening Packet from June. Impacts are based on functional design slope stake limits plus 40 feet. Not included is the breakout of impacts to intermittent v. perennial streams, which are 272 ft and 3,050 ft respectively. I will provide updated impacts once the WET file is finalized with yesterday's updates. If you have any questions please let me know.

Thanks,

Kat Bukowy

**Kat Bukowy, AICP**

Transportation Planner

**Direct** (919) 424-0441 **Fax** (919) 546-9421

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STIP Project R-5763  
Concurrence Point 1

## Section 404/NEPA Merger Project Team Meeting Agreement Concurrence Point No. 1 Project Purpose and Need and Study Area Defined

Project Name/Description: SR 1540 (Wilson Road) between US 276 and SR 1504 (Old US 64/Old Hendersonville Highway). **STIP Project: R-5763**

**Project Need:**

Currently, Wilson Road is flooded during 10-year and 50-year flood events making the road impassable to residents, those traveling to or from businesses, and to the City of Brevard’s wastewater treatment plant (WWTP). In addition, Wilson Road exceeds the statewide and critical crash rates for similar roadways in non-fatal injury and wet crashes.

**Project Purpose:**

The purpose of this project is to bring the roadway out of the 2 percent annual chance (50-year) flood zone of the French Broad River and address facility deficiencies throughout the corridor, bringing the road up to minimum design standards.

**Project Study Area**

The project study area boundaries are shown on **Figure 2**. The study area for this project encompasses approximately 200 feet on either side of the existing Wilson Road centerline. It extends approximately 250 additional feet to the east of the centerline as it approaches Old US 64/Old Hendersonville Highway to include the Ecusta Road intersection. Where the French Broad River is closer to the road than the 200-foot boundary, the study area stops at the French Broad River. The resultant study area encompasses approximately 173 acres, including sufficient area to pursue alignment shifts and apply avoidance and minimization measures during design development.

The Merger Team has concurred on this date of February 13, 2019, on the above project purpose and need and the study area as shown in **Figure 2** for STIP Project R-5763.

USACE	DocuSigned by: <i>Crystal Umschler</i> 08C05A077D234BC...
USEPA	<i>Amaratta Somerville</i>
USFWS	DocuSigned by: <i>Claire Ellwanger</i>
NCDWR	DocuSigned by: <i>Kevin Barnett</i>
NCWRC	DocuSigned by: <i>Marla Chambers</i>
NCDOT	B1D3DCA076AD4C9... <i>Scott Miller</i>  BF0751551ACC4ED...

NCHPO	DocuSigned by: <i>Renee Gledhill-Earley</i>
Land of Sky RPO	DocuSigned by: <i>Vicki Eastland</i> 4B8C017A580645F...
Eastern Band of Cherokee Indians	
Cherokee Nation	
United Keetowah Band	

## Wilson Road Meeting Summary

STIP Project No. R-5763 Concurrence Point #1 (CP1) Meeting  
Thursday, January 24, 2019, 1:00 p.m.  
Structure Design Conference Room

### Meeting Participants

Name	Agency	Email address	Phone
*Crystal Amschler	USACE	crystal.c.amschler@usace.army.mil	828-271-7980 ext. 4231
*Renee Gledhill-Earley	SHPO	renee.gledhill-earley@ncdcr.gov	919-814-6579
*Kevin Barnett	NCDEQ DWR	kevin.barnett@ncdenr.gov	828-296-4657
Marla Chambers	NCWRC	marla.chambers@ncwildlife.org	704-984-1070
Vicki Eastland	Land of Sky RPO	<a href="mailto:vicki.eastland@landofsky.org">vicki.eastland@landofsky.org</a>	828-251-7450
Scott Miller	NCDOT – Division 14	<a href="mailto:jsmiller3@ncdot.gov">jsmiller3@ncdot.gov</a>	828-631-1171
*Wanda Austin	NCDOT – Division 14	<a href="mailto:whaustin@ncdot.gov">whaustin@ncdot.gov</a>	828-631-1142
Josh Deyton	NCDOT – Division 14	<a href="mailto:jbdeyton@ncdot.gov">jbdeyton@ncdot.gov</a>	828-586-2141
Dave McHenry	NCDOT – Division 14	<a href="mailto:dgmchenry@ncdot.gov">dgmchenry@ncdot.gov</a>	828-586-2141
*Bucky Galloway	NCDOT – Division 14	ddgalloway@ncdot.gov	828-650-2700
Paul Petrich	HNTB	ppetrich@hntb.com	919-424-0465
Kat Bukowy	HNTB	kbukowy@hntb.com	919-424-0441
Matt Foster	HNTB	mfoster@hntb.com	919-424-0460
Roy Tellier	HNTB	<a href="mailto:rtellier@hntb.com">rtellier@hntb.com</a>	919-424-0428
James Mason	Three Oaks Engineers	james.mason@threeoaksengineers.com	919-732-1300
Mike Sanderson	NCDOT – Biological Surveys	<a href="mailto:jmsanderson@ncdot.gov">jmsanderson@ncdot.gov</a>	919-707-6154
John Jamison	NCDOT – Environmental Policy Unit	<a href="mailto:johnjamison@ncdot.gov">johnjamison@ncdot.gov</a>	919-707-6140

\*= present via phone

### Meeting Summary

This meeting was held for Concurrence Point 1 (CP1) – Purpose and Need and Study Area Defined. Kat Bukowy (HNTB) presented on behalf of NCDOT Division 14 and began the meeting with introductions and stated that the proposed purpose of the project was updated after conversations with US Army Corps of Engineers (USACE). An updated packet was sent out to the Merger Team on January 23, 2019. Updates to the crash data reported in the packet had also been made.

John Jamison (NCDOT – EPU) noted that although the US Fish and Wildlife Service (USFWS) and US Environmental Protection Agency (USEPA) were unable to attend this meeting all information and discussions from the meeting will be provided to them. Once they have been informed and any comments or questions they have are addressed, the concurrence form will be sent out for signature.

The following topics were presented in a PowerPoint presentation:

**1 – Project Overview** - An overview of the project location, background, schedule, and cost as well as noting other nearby STIP projects and existing facility characteristics.

**2 – Concurrence Point 1** – The proposed purpose and need were provided to the Merger Team with pictures and anecdotal evidence of recent flooding and crash data as supporting evidence. The Transylvania Transportation Advisory Committees reasons for wanting the project were also included.

**3 – Avoidance and Minimization Measures** – A review of the project Avoidance and Minimization Measures beginning in the Feasibility Stage was presented.

**4 – Next Steps/Schedule** –Following conversations with USACE, CP2 and 2A will be held on March 20, 2019 at 10:00 a.m. (date and time subject to change).

**5 – Discussion/Decision to Remain in Merger** – Merger Team members expressed agreement with the proposed purpose and need and indicated they would sign the concurrence form once USEPA and USFWS have had time to review.

**Additional discussion points:**

- Crystal Amschler (USACE) inquired as to why the existing road does not meet current design standards for a 40 mph roadway. Roy Tellier (HNTB) responded explaining how the current road has deficient curves; the width of each lane is 9 feet, which is below the current 12-foot standard, and has no usable shoulders. Additionally, the current road gives drivers less than required superelevation. These factors contribute to increased accident rates.
- Crystal and Renee Gledhill-Early (NCHPO) also inquired about how wide the road cross section will be. Roy answered that the paved cross section is 32 feet, with the usable roadway width being 40 feet.
- Marla Chambers (NCWRC) asked whether or not the French Broad River was still being studied despite being avoided in the study area. Kat and Jim Mason (Three Oaks Engineering) responded that the Action Area for the Appalachian elktoe included the river, floodplain, and the eastern edge of the study area. The study area stops at the river so that no roadway design will directly encroach into the river.
- Renee stated that the NC HPO has agreed with the three sites recommended eligible for listing on the National Register of Historic Places (NRHP).
- Kat told the Team that NCDOT’s Archaeology Group did not find any National Register listed Archaeological sites, nor did subsurface investigations reveal the presence of any archaeological resources considered eligible for the National Register. However, the Wetzel Family Cemetery is located just north of the Glen Cannon golf course adjacent to Wilson Road.
- Kat clarified that the mobile home community was determined to be a disparate impact under Title VI.
- Vicki Eastland (Land of Sky RPO) indicated that she had not received any of the email invitations and clarified that her email is [vicki.eastland@landofsky.org](mailto:vicki.eastland@landofsky.org)

**Action Items:**

- The group will wait for USEPA and USFWS to return before signing the document. The signatures will be acquired via DocuSign.
- Crystal (USACE) would like to see a Build Alternative that would replace the bridge over the French Broad River in place.
- Once the USEPA and USFWS return to business a conference call may be set up to update them on the project and its Merger status. *Update: John Jamison contacted both USFWS and USEPA and they*

*will review the meeting materials and as long as there are no questions/concerns signing of the concurrence form will be coordinated.*

STIP Project R-5763  
Concurrence Points 2 and 2A

## Section 404/NEPA Merger Project Team Meeting Agreement Concurrence Point No. 2 Detailed Study Alternatives Carried Forward

Project Name/Description: SR 1540 (Wilson Road) between US 276 and SR 1504 (Old US 64/Old Hendersonville Highway). **STIP Project: R-5763**

X **No Build Alternative** – Carried forward for the purpose of a baseline, does not meet purpose and need.

The two Build Alternatives listed below would bring the roadway up to minimum design standards and bring the road out of the 2 percent annual chance (50-year) floodplain of the French Broad River.

X **Build Alternative 1** – Realign Wilson Road to intersect with Ecusta Road, creating a four-way intersection. Beginning approximately 0.4 mile south of the northern terminus, this realignment would shift the road, and the bridge, approximately 260 feet east of the existing road and bridge. The existing bridge and remaining pavement would be removed and the remnant portion of Wilson Road north of the river would be terminated at the French Broad River, allowing for access to businesses, homes, and the river access area.

\_\_\_\_\_ **Build Alternative 2** – Wilson Road would remain on its existing alignment, beginning approximately 0.4 mile south of the northern terminus. The current bridge over the French Broad River would be replaced in place.

The Merger Team has concurred on this date of March 20, 2019, on the above Detailed Study Alternatives Carried Forward for STIP Project R-5763.

USACE	DocuSigned by: <i>Crystal Umschuler</i>	_____
USEPA	86C05A077D234BC... <i>Imanetta Somerville</i>	_____
USFWS	DocuSigned by: <i>Claire Ellwanger</i>	_____
NCDWR	DocuSigned by: <i>Kevin Barnett</i>	_____
NCWRC	DocuSigned by: <i>Marla Chambers</i>	_____
NCDOT	B1D3DCA078AD4C9... <i>Scott Miller</i>	_____ <i>SM</i>
	BF0751551ACC4ED...	

NCHPO	DocuSigned by: <i>Renee Gledhill-Easley</i>	_____
Land of Sky RPO	DocuSigned by: <i>Vicki Eastland</i>	_____
Eastern Band of Cherokee Indians	4B8C017A580645F... <i>[Signature]</i>	_____
Cherokee Nation	1BFC440580314BE...	_____
United Keetowah Band		_____

STIP Project R-5763  
Concurrence Points 2 and 2A

### Section 404/NEPA Merger Project Team Meeting Agreement Concurrence Point No. 2A Bridging Decisions and Alignment Review

Project Name/Description: SR 1540 (Wilson Road) between US 276 and SR 1504 (Old US 64/Old Hendersonville Highway). **STIP Project: R-5763**

Remove and replace the existing bridge over Williamson Creek with an approximately 300-foot long bridge on new alignment. Length will be determined following the 2D Hydraulic modeling of the French Broad River and its floodplain.

Remove and replace the existing bridge over the French Broad River with a bridge that is greater than 1,000 feet in length on new alignment. Length will be determined following the 2D Hydraulic modeling of the French Broad River and its floodplain.

The Merger Team has concurred on this date of March 20, 2019, on the above Bridging Decisions and Alignment Review for STIP Project R-5763.

USACE	DocuSigned by: <i>Crystal Dmschler</i>
USEPA	88C05A377D234BC... <i>Amanetta Somerville</i>
USFWS	4A27866ED4E7400 DocuSigned by: <i>Claire Ellwanger</i>
NCDWR	DocuSigned by: <i>Kevin Barnett</i>
NCWRC	DocuSigned by: <i>Marla Chambers</i>

B1D3DCA076AD4C9...

NCDOT	DocuSigned by: <i>Scott Miller</i>
Land of Sky RPO	DocuSigned by: <i>Vicki Eastland</i>
Eastern Band of Cherokee Indians	4B8C017A580645F... <i>[Signature]</i>
Cherokee Nation	1BFC440580314BE...
United Keetowah Band	

STIP Project R-5763  
Concurrence Points 2 and 2A

### Section 404/NEPA Merger Project Team Meeting Agreement Concurrence Point No. 2A Bridging Decisions and Alignment Review

Project Name/Description: SR 1540 (Wilson Road) between US 276 and SR 1504 (Old US 64/Old Hendersonville Highway). **STIP Project: R-5763**

Remove and replace the existing bridge over Williamson Creek with an approximately 300-foot long bridge on new alignment. Length will be determined following the 2D Hydraulic modeling of the French Broad River and its floodplain.

Remove and replace the existing bridge over the French Broad River with a bridge that is greater than 1,000 feet in length on new alignment. Length will be determined following the 2D Hydraulic modeling of the French Broad River and its floodplain.

The Merger Team has concurred on this date of March 20, 2019, on the above Bridging Decisions and Alignment Review for STIP Project R-5763.

USACE DocuSigned by:  
*Crystal Dmschler*

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USEPA 88C05A377D234BC...  
*Amanetta Somerville*

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USFWS 4A27886EDAE7400  
DocuSigned by:  
*Claire Ellwanger*

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NCDWR DocuSigned by:  
*Kevin Barnett*

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NCWRC DocuSigned by:  
*Marla Chambers*

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NCDOT DocuSigned by:  
*Scott Miller*

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Land of Sky RPO DocuSigned by:  
*Vicki Eastland*

---

Eastern Band of Cherokee Indians 4B8C017A580645F...

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Cherokee Nation

---

United Keetowah Band

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## Wilson Road Meeting Summary

STIP Project No. R-5763 Concurrence Point 2 and 2A Meeting  
Wednesday, March 20, 2019, 10:00 a.m.  
Structure Design Conference Room

### Meeting Participants

Name	Agency	Email address	Phone
Monte Matthews	USACE	Monte.k.matthews@usace.army.mil	828-271-7980 ext. 4231
*Renee Gledhill-Earley	SHPO	renee.gledhill-earley@ncdcr.gov	919-814-6579
*Amanetta Somerville	USEPA	<a href="mailto:somerville.amanetta@epa.gov">somerville.amanetta@epa.gov</a>	404-562-9644
Claire Ellwanger	USFWS	<a href="mailto:Claire_ellwanger@fws.gov">Claire_ellwanger@fws.gov</a>	828-258-3939 ext. 235
*Kevin Barnett	NCDEQ DWR	kevin.barnett@ncdenr.gov	828-296-4657
Marla Chambers	NCWRC	marla.chambers@ncwildlife.org	704-984-1070
Vicki Eastland	Land of Sky RPO	<a href="mailto:vicki.eastland@landofsky.org">vicki.eastland@landofsky.org</a>	828-251-7450
Stephen Yerka	EBCI	<a href="mailto:syerka@nc-cherokee.com">syerka@nc-cherokee.com</a>	828-359-6852
Erin Thompson	UKB	<a href="mailto:ethompson@ukb-nsn.gov">ethompson@ukb-nsn.gov</a>	918-871-2838
Scott Miller	NCDOT – Division 14	<a href="mailto:jmiller3@ncdot.gov">jmiller3@ncdot.gov</a>	828-631-1171
*Wanda Austin	NCDOT – Division 14	<a href="mailto:whaustin@ncdot.gov">whaustin@ncdot.gov</a>	828-631-1142
Josh Deyton	NCDOT – Division 14	<a href="mailto:jbdeyton@ncdot.gov">jbdeyton@ncdot.gov</a>	828-586-2141
Dave McHenry	NCDOT – Division 14	<a href="mailto:dgmchenry@ncdot.gov">dgmchenry@ncdot.gov</a>	828-586-2141
Mike Sanderson	NCDOT – Environmental Policy Unit	<a href="mailto:jmsanderson@ncdot.gov">jmsanderson@ncdot.gov</a>	919-707-6154
John Jamison	NCDOT – Environmental Policy Unit	<a href="mailto:johnjamison@ncdot.gov">johnjamison@ncdot.gov</a>	919-707-6140
Kat Bukowy	HNTB	kbukowy@hntb.com	919-424-0441
Matt Foster	HNTB	mfoster@hntb.com	919-424-0460
Roy Tellier	HNTB	<a href="mailto:rtellier@hntb.com">rtellier@hntb.com</a>	919-424-0428
Tenecia Jones	HNTB	<a href="mailto:tgjones@hntb.com">tgjones@hntb.com</a>	919-424-0408
James Mason	Three Oaks Engineers	james.mason@threeoaksengineers.com	919-732-1300

\*= present via phone

### **Meeting Summary**

This meeting was held for Concurrence Points 2 (CP2) – Detailed Study Alternatives Carried Forward – and CP 2A – Bridging Decisions. Monte Matthews (USACE) opened the meeting, explaining that he was representing the USACE on behalf of Crystal Amschler. Following introductions, Monte Matthews opened the floor to Scott Miller (Project Manager - Division 14) who asked Kat Bukowy (HNTB) to present on behalf of NCDOT Division 14.

The following topics were presented in a PowerPoint presentation:

**1 – Purpose of the Meeting** – To achieve concurrence on Detailed Study Alternatives and Bridging Decisions.

**2 – Project Overview** – Brief review of the project location and unique environmental features. Review of the purpose and need for the project.

**3 – Concurrence Point 2 – Design Alternatives for Further Study** – Included a discussion on Alternatives Considered but Eliminated; the No-Build Alternative, which does not meet purpose and need, but is being kept as a baseline; and the potential Build Alternatives under consideration:

Build Alternative 1: Replace Bridge over French Broad River on New Alignment

Build Alternative 2: Replace Bridge over French Broad River in Place

When compared to each other Build Alternative 2 has greater overall impacts. NCDOT recommended moving the No Build Alternative and Build Alternative 1 forward for further study. The Merger Team agreed with this recommendation.

**3 – Concurrence Point 2A – Bridging Decisions** – The major structures on this project are the bridge over Williamson Creek and the bridge over the French Broad River. Both structures are recommended for removal and replacement on new alignment. The length of the bridges will be determined once the 2D Hydraulic Modeling is complete. The Merger Team agreed with this recommendation.

**4 – Avoidance and Minimization Measures** – A review of the project Avoidance and Minimization Measures that have occurred since CP 1 was given.

**5 – Next Steps/Schedule** – The schedule dates in the provided Merger Packet were updated to:

<b>Milestone</b>	<b>Schedule*</b>
Concurrence Point 2/2A	March 2019
Biological Assessment	May 2019
Concurrence Point 3/4A	May 2019
Biological Opinion	August 2019
State EA/FONSI	August 2019
Begin ROW Acquisition <sup>1</sup>	FY 2019
Begin Construction <sup>1</sup>	FY 2021
*tentative, subject to change;	
<sup>1</sup> This schedule is expected to change to FY 2023/FY 2027 in the proposed 2020 – 2028 STIP	

Once the 2D Hydraulic Modeling is complete and the design can be evaluated for impacts, Division will apply for the Merger Public Notice. Once the 30-day period for the Merger PN has closed, the Merger Team can decide if a meeting is warranted or if CP 3 – Least Environmentally Damaging Practicable Alternative (LEDPA) can be decided via either a WebEx call or email.



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**NATIONAL MARINE FISHERIES SERVICE**  
Southeast Regional Office  
263 13<sup>th</sup> Avenue South  
St. Petersburg, Florida 33701-5505  
<https://www.fisheries.noaa.gov/region/southeast>

(Sent via Electronic Mail)

April 25, 2020

Colonel Robert J. Clark, Commander  
USACE Wilmington District  
69 Darlington Avenue  
Wilmington, North Carolina 28403-1398

Dear Colonel Clark:

NOAA’s National Marine Fisheries Service (NMFS) reviewed the project described in the public notice listed below. Based on the information in the public notice, the proposed project would **NOT** occur in the vicinity of essential fish habitat (EFH) designated by the South Atlantic Fishery Management Council, Mid-Atlantic Fishery Management Council, or the NMFS. Present staffing levels preclude further analysis of the proposed work and no further action is planned. This position is neither supportive of nor in opposition to authorization of the proposed work.

<b>Notice No.</b>	<b>Applicant(s)</b>	<b>Notice Date</b>
SAW-2018-00986	NCDOT; Wilson Road Improvement TIP No. R5763	April 23, 2020

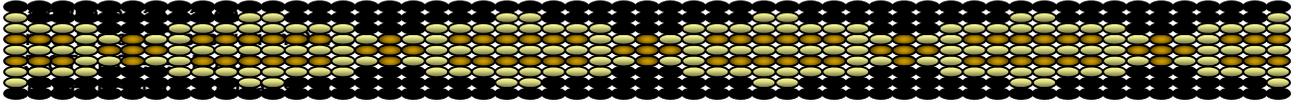
Please note these comments do not satisfy consultation responsibilities under section 7 of the Endangered Species Act of 1973, as amended. If an activity “may effect” listed species or critical habitat under the purview of the NMFS, please initiate consultation with the Protected Resources Division at the letterhead address.

Sincerely,

WILBER.THOMAS.  
PAYSON.1365820  
186  
/ for  
Virginia M. Fay  
Assistant Regional Administrator  
Habitat Conservation Division

Digitally signed by  
WILBER.THOMAS.PAYSON.136  
5820186  
Date: 2020.04.25 23:23:49  
-04'00'





Office 803-328-2427  
Fax 803-328-5791

June 1, 2020

Attention: Crystal Amschler  
US Army Corps of Engineers  
151 Patton Avenue, Room 208  
Asheville, NC 28801-5006

Re. THPO #	Project #	Project Description
2020-56-3	R-5763	Proposed Wilson Road Improvements in Brevard, Transylvania Co., NC

Dear Ms. Amschler,

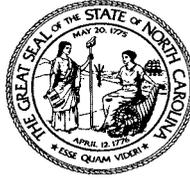
The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail [Caitlin.Rogers@catawba.com](mailto:Caitlin.Rogers@catawba.com).

Sincerely,

A handwritten signature in cursive script that reads "Caitlin Rogers for".

Wenonah G. Haire  
Tribal Historic Preservation Officer



**North Carolina Department of Natural and Cultural Resources  
State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Roy Cooper  
Secretary Susi H. Hamilton

Office of Archives and History  
Deputy Secretary Kevin Cherry

May 19, 2020

Crystal Amschler  
US Army Corps of Engineers  
Asheville Regulatory Field Office  
151 Patton Avenue, Room 208  
Asheville, NC 28801

Re: Upgrade SR 1540 from SR 1504 to US 276, Brevard R-5763, Transylvania County, ER 18-3384

Dear Ms. Amschler:

Thank you for your letter of April 23, 2020 concerning the above project.

We have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or [environmental.review@ncdcr.gov](mailto:environmental.review@ncdcr.gov). In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

A handwritten signature in blue ink that reads "Renee Gledhill-Earley".

 Ramona Bartos, Deputy  
State Historic Preservation Officer

## Kat Bukowy

**From:** Gledhill-earley, Renee <renee.gledhill-earley@ncdcr.gov>  
**Sent:** Friday, June 12, 2020 10:38 AM  
**To:** Furr, Mary Pope; Amschler, Crystal C CIV USARMY CESAW (US)  
**Cc:** Kat Bukowy; Mosteller, Barry D; McHenry, David G; Higdon, Garrett B  
**Subject:** RE: R-5763 Wilson Rd Transylvania Co

Crystal:

I see that something went wrong in our processing and the letter should not have gone out clearing all resources. There are structure issues.

Will look forward to an Effects meeting.

Renee

--

Uhgqh#T dngk loOHdudh |  
 Environmental Review Coordinator  
 State Historic Preservation Office  
 109 E Jones St MSC 4617 Raleigh, NC 27699  
 919 814 6579 office

#StayStrongNC  
 Learn more @ [nc.gov/covid19](https://nc.gov/covid19)

And don't forget your Ws! Wear. Wait. Wash.  
WEAR a face covering.  
WAIT 6 feet apart from other people.  
WASH your hands often.

**\*\*COVID-19 has changed the way we accept non-electronic mail . See below.\*\***



Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

**Please Note:**

**Requests for project review or responses to our review comments should be sent to our Environmental Review mailbox at [environmental.review@ncdcr.gov](mailto:environmental.review@ncdcr.gov) Otherwise, I will have to return your request and ask that you send it to the proper mailbox.**

**This will cause delays in your project. Information on email project submittal is at: <https://www.ncdcr.gov/state-historic-preservation-office/environmental-review/environmental-review-submission-process-0>**

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 wkh#p #F#xwrg l#dw#di#z lo#QRW#dffhsw#DQ\#ghdyhulhv#  
 #

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**From:** Furr, Mary Pope <mfurr@ncdot.gov>  
**Sent:** Friday, June 12, 2020 9:10 AM  
**To:** Gledhill-earley, Renee <renee.gledhill-earley@ncdcr.gov>; Amschler, Crystal C CIV USARMY CESAW (US) <Crystal.C.Amschler@usace.army.mil>  
**Cc:** Kat Bukowy <kbukowy@hntb.com>; Mosteller, Barry D <bmosteller@ncdot.gov>; McHenry, David G <dgmchenry@ncdot.gov>; Higdon, Garrett B <gbhigdon@ncdot.gov>  
**Subject:** R-5763 Wilson Rd Transylvania Co

PA# 18-01-0032

I was just notified of this letter from HPO to USACE which I believe to be incorrect. NCDOT has completed surveys and identified eligible historic resources for this project that require an effects assessment if they fall within the permit area. Crystal, I am copying you on the PA forms generated to date. The survey report can be found on NCDOT's SharePoint site. Two weeks ago I visited the project area to take some additional pictures to assist in the effects consultation. What we need now is a determination from USACE if the 3 properties fall within USACE's jurisdictional area(s)- then we can proceed with the next steps in the 106 process.

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Email correspondence to and from this sender is subject to the N.C. Public Records Law and may be disclosed to third parties.



## ☒ North Carolina Wildlife Resources Commission ☒

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Gordon Myers, Executive Director

May 26, 2020

### MEMORANDUM

**TO:** Crystal Amschler, Project Manager  
Asheville Regulatory Field Office, USACE

**FROM:** Marla Chambers, Western NCDOT Coordinator *Marla Chambers*  
Habitat Conservation Program, NCWRC

**SUBJECT:** Review of the NCDOT's proposed upgrade to Wilson Road by moving it out of the French Broad River's 50-year floodplain, Transylvania County, North Carolina. TIP No. R-5763.

The U.S. Army Corps of Engineers has issued a Public Notice requesting comments regarding impacts to fish and wildlife resources resulting from the subject project. Staff biologists from the North Carolina Wildlife Resources Commission have reviewed the information provided. These comments are provided in accordance with the provisions of the state and federal Environmental Policy Acts (G.S. 113A-1 through 113-10; 1 NCAC 25 and 42 U.S.C. 4332(2)(c), respectively), the Clean Water Act of 1977 (33 U.S.C. 466 et seq.), the Endangered Species Act (16 U.S.C. 1531-1543; 87 Stat 884), and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d), as applicable.

The North Carolina Department of Transportation proposes to upgrade Wilson Road by moving it out of the French Broad River's 50-year floodplain, and address facility deficiencies throughout the corridor, bringing the road up to minimum design standards. In addition to the French Broad River, a tributary, Williamson Creek, may be impacted by the project. Williamson Creek is designated as High Quality Water. Reproducing trout are not expected in the project vicinity, therefore, we are not requesting a trout moratorium. In addition to the federally Endangered Appalachian Elktoe, state-listed species, including the Eastern Hellbender and Mudpuppy occur in the French Broad River. The most protective sediment and erosion control measures, which adhere to the Design Standards in Sensitive Watersheds, must be used to protect rare and sensitive aquatic species in the project area and downstream. Stormwater management and treatment are also important for water quality and the stream inhabitants.

R-5763, WILSON ROAD  
FBR, WILLIAMSON CR., TRANSYLVANIA CO. 2

MAY 26, 2020

Wildlife crossings should be considered. NCDOT should investigate the rate of accidents with wildlife and identify any areas of concern. Habitat fragmentation should also be studied for reconnection opportunities. Retrofits or crossing structure replacements may be appropriate. We are also concerned about secondary and cumulative impacts, as the improved roadway may attract additional development. The environmental document should provide details on local protections and growth management efforts and address secondary and cumulative impact concerns. Measures to mitigate secondary and cumulative impacts can be found in the Guidance Memorandum to Address and Mitigate Secondary and Cumulative Impacts to Aquatic and Terrestrial Wildlife Resources and Water Quality (NCWRC 2002)

[http://www.ncwildlife.org/portals/0/Conserving/documents/2002\\_GuidanceMemorandumforSecondaryandCumulativeImpacts.pdf](http://www.ncwildlife.org/portals/0/Conserving/documents/2002_GuidanceMemorandumforSecondaryandCumulativeImpacts.pdf) .

In addition, to help facilitate document preparation and the review process, our general information needs are outlined below:

1. Description of fishery and wildlife resources within the project area, including a listing of federally or state designated threatened, endangered, or special concern species. Potential borrow areas to be used for project construction should be included in the inventories. A listing of designated plant species can be developed through consultation with the following programs:

N.C. Natural Heritage Program  
[www.ncnhp.org](http://www.ncnhp.org)  
1651 Mail Service Center  
Raleigh, N. C. 27699-1651

and,

NCDA Plant Conservation Program  
P. O. Box 27647  
Raleigh, N. C. 27611  
(919) 733-3610

2. Description of any streams or wetlands affected by the project. If applicable, include the linear feet of stream that will be channelized or relocated.
3. Cover type maps showing wetland acreage impacted by the project. Wetland acreage should include all project-related areas that may undergo hydrologic change as a result of ditching, other drainage, or filling for project construction. Wetland identification may be accomplished through coordination with the U. S. Army Corps of Engineers (USACE). If the USACE is not consulted, the person delineating wetlands should be identified and criteria listed.
4. Cover type maps showing acreage of upland wildlife habitat impacted by the proposed project. Potential borrow sites and waste areas should be included.

R-5763, WILSON ROAD  
FBR, WILLIAMSON CR., TRANSYLVANIA CO. 3

MAY 26, 2020

5. Show the extent to which the project will result in loss, degradation, or fragmentation of wildlife habitat (wetlands or uplands).
6. Include the mitigation plan for avoiding, minimizing or compensating for direct and indirect degradation in habitat quality as well as quantitative losses.
7. Address the overall environmental effects of the project construction and quantify the contribution of this individual project to environmental degradation.
8. Provide a discussion of the probable impacts on natural resources, which will result from secondary development, facilitated by the improved road access.
9. If construction of this facility is to be coordinated with other state, municipal, or private development projects, a description of these projects should be included in the environmental document, and all project sponsors should be identified.

Thank you for the opportunity to provide input in the early planning stages of this project. If you have any questions regarding these comments, please contact me at [marla.chambers@ncwildlife.org](mailto:marla.chambers@ncwildlife.org).

Cc: Claire Ellwanger, USFWS  
Kevin Mitchell, NCDWR



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

June 10, 2020

Marla Chambers  
Western NCDOT Coordinator  
Habitat Conservation Program, NC Wildlife Resources Commission  
1721 Mail Service Center  
Raleigh, NC 27699-1721

Ms. Chambers,

Thank you for providing the NC Wildlife Resource Commission's response to the US Army Corps of Engineers (USACE) Public Notice on State Transportation Improvement Program (STIP) Project R-5763, Improvements to Wilson Road, in Transylvania County.

NCDOT, in cooperation with the USACE, is preparing a Biological Assessment (BA) for submittal to the US Fish and Wildlife Service (USFWS) regarding the federally listed endangered Appalachian elktoe. Under its policy, NCDOT will use Design Standards in Sensitive Watersheds throughout the project due to the proximity of the project to the French Broad River and crossing of Williamson Creek. In addition to these standards, NCDOT will use energy dissipators to reduce the velocity of stormwater prior to entering the French Broad River and other streams.

Crash analysis for the 5-year period from May 1, 2013 to April 30, 2018 indicate four vehicle-animal (deer) collisions. These collisions occurred throughout the road corridor with no areas of concentration. Based on the variable landscape cover along the road, which alternates from open agriculture, to forested areas, to development, wildlife crossings of the road along upland areas are likely not concentrated to one or a few locations and are generally unpredictable overall, thus hampering the ability to implement effective mitigation measures. The structures at Williamson Creek and the French Broad River will increase in length by 190 feet and 970 feet, respectively. The increase in opening in these two locations should also allow for improved wildlife crossing.

Although the project proposes realigning Wilson Road with Ecusta Road, which will provide a modified network connection and therefore new access to property, it is not expected that this will lead to new growth along the corridor. In addition, this project will raise the road out of the 50-year floodplain and improve safety by raising the vertical and horizontal alignment to current design standards; it will not add capacity to the roadway. Due to the topography and City of Brevard and Transylvania County land development policies, it is unlikely that the area along the corridor will experience much growth. This area is entirely outside of the three "Designated Growth Areas" shown in the Transylvania County 2025 Comprehensive Plan. The Indirect and Cumulative Effects Screening matrix appended to the R-5763 Short form Community Impact

*Mailing Address:*  
NC DEPARTMENT OF TRANSPORTATION  
HIGHWAY DIVISION 14  
253 WEBSTER ROAD  
SYLVA, NC 28799

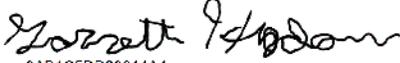
*Telephone:* 828-586-2141  
*Fax:* 828-586-4043  
*Customer Service:* 1-877-368-4968

*Location:*  
253 WEBSTER ROAD  
SYLVA, NC 28799

*Website:* [ncdot.gov](http://ncdot.gov)

Assessment concluded that a further Land Use Scenario Assessment (LUSA) was “not likely” due to a moderately low concern for indirect and cumulative effects for the project.

Sincerely,

DocuSigned by:  
  
8AB1C5DD20614A4...

Garrett Higdon  
Project Manager

## **Amschler, Crystal C CIV USARMY CESAW (US)**

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**From:** Larry Day <larry@turfmountain.com>  
**Sent:** Tuesday, May 19, 2020 8:14 AM  
**To:** Amschler, Crystal C CIV USARMY CESAW (US)  
**Cc:** Wayne Pittillo; turfmountain  
**Subject:** [Non-DoD Source] Corps Action ID Number: SAW-2018-00986

May 19, 2020

[Crystal.c.amschler@usace.army.mil](mailto:Crystal.c.amschler@usace.army.mil)

US Army Corps of Engineers

Re: Corps Action ID Number: SAW-2018-00986  
State Transportation Improvement Program (STIP) project R-5763  
Comment Deadline: May 26, 2020

We are Turf Mountain Sod, Inc., a family owned farming business with offices in Hendersonville, NC and land use in the affected area covered by the above ID Numbers.

With certain minor caveats, we support the proposal to re-align Wilson Road including replacing the existing bridge over the French Broad River and raising the roadway out of the 50-year floodplain. The Build Alternative is a much-needed enhancement to this area. Our concerns are as follows:

- Access points to our farmland exist at certain intervals which are critical to our use. Due to specific natural access limitations such as land boundaries, waterways, etc., if we cannot access our farmland with the necessary machinery its value becomes highly diminished and in fact could be worthless. We request that before the plan is 'cast-in-stone' we be advised and consulted as to how and where we will be able to gain access to our farmland.
- The existing bridge over the French Broad severely limits water flow during heavy rains, ultimately causing flooding in the adjoining basin as well as flooding the roadway. Our concern is that the new bridge and any possible attendant adjustments to the stream itself, adequately address this by allowing sufficient flow to relieve the current volumes as well as future volumes. If the roadway is raised and the bridge is not made wide enough it was cause even greater flooding problems than exist today, perhaps not to the roadway per se, but much more so to the adjoining properties.
- We are fifth and sixth generation farmers and always try to be good stewards of the land. We understand that construction, whether it be us installing drainage to our farmland or construction

crews replacing bridges and realigning roads, will cause a certain amount of damage to the land. We fervently hope that the collateral damage to our crops and land will be minimal and any damage caused will be either repaired to its prior condition or we will be compensated for the loss.

- And finally, this project, which we agree is in the public's best interest, will most definitely take considerable pieces of valuable farmland from our family and therefore our concern is how will we be compensated? This understandably may not be within the purview of the USACE, but we do need to understand where we can address this concerning matter.

Thank you for this opportunity to comment on the above project and for your further consideration.

Respectfully Submitted,

*F. Wayne Pittillo*

F. Wayne Pittillo

President

Turf Mountain Sod, Inc.

3277 Chimney Rock Rd.

Hendersonville, NC 28792

(828) 685-3642

**From:** Higdon, Garrett B

**Sent:** Thursday, June 11, 2020 2:15 PM

**To:** Larry Day <[larry@turfmountain.com](mailto:larry@turfmountain.com)>

**Cc:** Wayne Pittillo <[waynepittillo@gmail.com](mailto:waynepittillo@gmail.com)>; turfmountain <[turfmountain@bellsouth.net](mailto:turfmountain@bellsouth.net)>; Amschler, Crystal C CIV USARMY CESAW (US) <[Crystal.C.Amschler@usace.army.mil](mailto:Crystal.C.Amschler@usace.army.mil)>

**Subject:** RE: [Non-DoD Source] Corps Action ID Number: SAW-2018-00986

Good Afternoon Mr.Day,

Below I have restated your questions below and answered them in **BLUE**

Access points to our farmland exist at certain intervals which are critical to our use. Due to specific

natural access limitations such as land boundaries, waterways, etc., if we cannot access our farmland

with the necessary machinery its value becomes highly diminished and in fact could be worthless. We

request that before the plan is 'cast-in-stone' we be advised and consulted as to how and where we

will be able to gain access to our farmland.

**This project will not have restricted or controlled access and will allow for driveway access throughout the corridor. If you have an existing driveway, it will be reconnected to its current condition as part of the project.**

The existing bridge over the French Broad severely limits water flow during heavy rains, ultimately

causing flooding in the adjoining basin as well as flooding the roadway. Our concern is that the new

bridge and any possible attendant adjustments to the stream itself, adequately address this by allowing sufficient flow to relieve the current volumes as well as future volumes. If the roadway is

raised and the bridge is not made wide enough it was cause even greater flooding problems than exist

today, perhaps not to the roadway per se, but much more so to the adjoining properties.

**Design of the proposed bridge and roadway has included computer modeling to ensure that there will be no additional impacts to the existing floodplain. In other words, the design ensures that the proposed work will not cause any additional flooding upstream or downstream of the existing bridge.**

We are fifth and sixth generation farmers and always try to be good stewards of the land. We understand that construction, whether it be us installing drainage to our farmland or construction

crews replacing bridges and realigning roads, will cause a certain amount of damage to the land. We

ferverently hope that the collateral damage to our crops and land will be minimal and any damage

caused will be either repaired to its prior condition or we will be compensated for the loss

During construction of the project, NCDOT will utilize best management practices for the control of erosion and restoration of any potential impacts to your property. If the project requires any temporary impacts to your property, such as needing access to a portion of your property during the construction phase, then you will be compensated for this impact as a temporary construction easement.

And finally, this project, which we agree is in the public's best interest, will most definitely take considerable pieces of valuable farmland from our family and therefore our concern is how will we be compensated? This understandably may not be within the purview of the USACE, but we do need to understand where we can address this concerning matter.

The NCDOT will offer you fair market value, which can be negotiated, for any property that is impacted by the project. If you do not agree on an offer made by NCDOT staff, then condemnation proceedings will begin, which will place a given amount that is based off of an appraisal into an escrow account that you will be able to access. At that point you can continue to negotiate with the Attorney General's Office or you can pursue it in court

I hope this helps, please feel free to contact me if you have anymore questions or need any additional information.

Thanks,

**Garrett B. Higdon**

Transportation Engineering Associate  
North Carolina Department of Transportation

[gbhigdon@ncdot.gov](mailto:gbhigdon@ncdot.gov)



*Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties*



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

November 12, 2020

Mr. Hal Pitts  
USCG-Fifth CG District  
431 Crawford Street  
Portsmouth, VA 23704-

Subject: USCG Permit Inquiry for **Bridge No. 870036** on STIP Project **R-5763** on SR 1540 (Wilson Road) in Transylvania County, NC

Dear Mr. Pitts:

The North Carolina Department of Transportation (NCDOT) is seeking your determination of whether a USCG Permit will be required for the proposed SR 1540 (Wilson Road) improvement project (R-5763) in Transylvania County, NC (map attached). This project will require replacement of a fixed bridge #870036 over the French Broad River with a new bridge a short distance downstream (plans attached). The new bridge will have similar height compared to the existing structure, but with wider horizontal clearances (between bents).

This project is upstream of three other bridges over this river that your office recently determined were exempt from permitting (Bridge no.s 100211 and 100214, USCG ref. #16591, August 30, 2019 and bridge no. 440129 – email 7/13/20). However, as noted in your correspondence on those bridges, other bridges on this waterway should be evaluated independently. Therefore, please find attached a completed bridge questionnaire for the project to assist in your review. Also notable is that boat traffic on this reach of the river is limited to small, shallow draft vessels, typically non-motorized, that are operated during daylight mainly due to the river’s shallow water depths and considerable tree obstructions. Therefore, we believe that navigational lights are not warranted on the new bridges.

The NCDOT greatly appreciates your attention to this matter and looks forward to hearing from you. Please advise by email at [dgmchenry@ncdot.gov](mailto:dgmchenry@ncdot.gov) or call me at 828/246-7078 if you need any additional information to complete your review.

Signed by:  
DocuSigned by:

  
8B673FBE42E5415...  
Dave McHenry

11/12/2020

NCDOT Division 14 Environmental Officer

Attach:s  
R-5763 Bridge Questionnaire  
R-5763 Map  
R-5763 870036 Hydraulic Plans (2 pages)



431 Crawford Street  
Portsmouth, VA 23704-5004  
Staff Symbol: (dpb)  
Phone: 757-398-6629  
Fax: 757-398-6334  
Email:  
CGDFiveBridges@uscg.mil

BRIDGE PROJECT QUESTIONNAIRE

Please provide the following information:

A. NAVIGATION DATA:

- 1. Name of Waterway: French Broad River
- 1a. Mileage along waterway measured from mouth or confluence Approximately 48 miles downstream to nearest dam (Craggy Dam in Asheville) and 116 miles downstream to mouth at Douglas Reservoir in Tennessee.
- 1b. Tributary of: Tennessee River
- 2. Geographic Location: SR 1540, Transylvania County, North Carolina, 345572.28,3901963.88,UTM17N NAD83  
(Road Number, City, County, State) and **(Latitude and Longitude in NAD 83 form )**
- 3. Township, section and range, if applicable: Pisgah Forest
- 4. Tidally influenced at proposed bridge site? Yes  No   
Range of tide: N/A  
Tidal data source: N/A
- 5. Depth and width of waterway at proposed bridge site: 6' deep, 85' wide

Not Tidally Influenced

	Depths	Widths
At Mean High Tide	_____	_____.
At Mean Low Tide	_____	_____.

- 6. Character of present vessel traffic on waterway. If none , so state: None \_\_\_\_\_.  
Canoe  Rowboat \_\_\_\_\_ Small Motorboat  Cabin Cruiser \_\_\_\_\_ .  
Houseboat \_\_\_\_\_ Pontoon Boat \_\_\_\_\_ Sailboat .
- 6a. Provide vertical clearance requirement for largest vessel using the waterway:  
There are no requirements on this waterway regarding clearance. The new structure will have a similar clearance from normal water to low chord (bottom of deck beams) of about 19 feet compared to the existing bridge (about 18 feet).
- 6b. Provide photograph of each type of vessel using the waterway.



7. Are these waters used to transport interstate or foreign commerce?  
Yes \_\_\_\_\_ No X
- 7a. Are these waters susceptible to use in their natural condition or by reasonable improvement as a means to support interstate or foreign commerce?  
Yes \_\_\_\_\_ No X
- 7b. Any planned waterway improvements to permit larger vessels to navigate (to your knowledge)? NO If so, what are they? \_\_\_\_\_
- 
8. Any natural or manmade obstructions, bridges, dams, weirs, etc. downstream or upstream? Yes X No \_\_\_\_\_.
- 8a. If yes, provide upstream/downstream location with relation to the proposed bridge. There are no dams upstream. The nearest bridge upstream is 2.5 miles upstream. The nearest downstream dam (Craggy Dam) is 48 miles downstream. Downstream of Craggy Dam are at least two more dams on the river within NC and there are a series of dams along the Little Tennessee and Tennessee Rivers further downstream into Tennessee. The nearest bridge downstream is 1.4 miles.
- 8b. If bridges are located upstream or downstream, provide vertical clearance at mean high water and mean low water and horizontal clearance normal to the axis of the channel. The river is not tidal. Upstream the bridge clearance is approximately 23 feet from normal water elevation (32 feet from river bed to bridge crown) with approximately 60 feet of horizontal clearance between bridge bents/piles. Downstream bridge clearance is approximately 17 feet from normal water elevation (26 feet from river bed to bridge crown) with approximately 60 feet of horizontal clearance in two locations between bridge bents/piles.
- 8c. Provide a photograph of the bridge from the waterway showing channel spans. Attached is photo of existing bridge facing upstream (SW). Proposed bridge will not have bents in river and larger horizontal clearance (135 feet) than existing.



9. Will the structure replace an existing bridge? Yes  No  .
- 9a. Provide permit number and issuing agencies of permits for bridge(s) to be replaced. We are in the planning stages and have not applied for permits at this time. Project will likely require 404 Permit from ACOE.
- 9b. Provide vertical clearance at mean high water and mean low water and horizontal clearance normal to the axis of the channel for the proposed bridge.  
The clearance from normal water to low chord will be approximately 19 feet.
10. List names and addresses of persons whose property adjoins bridge right-of-way.

WHITE R BRUCE  
PO BOX 1067  
TRAVELERS REST SC 29690

Jackson Jacob R  
3 Cardinal Dr  
Brevard NC 28712

Lingerlong LLC &  
Twilldo LLC  
55 Cassville Rd  
Cartersville GA 30120

City of Brevard  
95 W Main St

## Brevard NC 28712

11. List names and addresses/location of marinas, marine repair facilities, public boat ramps, private piers/docks along the waterway within three miles of the bridge site.  
Wilson Road gravel access area for small trailer or portable boat is adjacent to existing bridge (NNE corner) and will remain after project completed.
12. Attach location map and plans for the proposed bridge; including vertical clearances above mean high water and mean low water and horizontal clearance normal to axis of the waterway. Attached
13. Attach three (3) photographs taken at the proposed bridge site: one looking upstream, one looking downstream, and one looking along the alignment centerline across the bridge site.



Facing upstream (SW) from existing bridge.



Facing downstream (NE) from existing bridge. New bridge will be constructed about 100 yards downstream of existing in this photo.



Facing NNW along centerline of bridge and SR 1540.

Name of applicant: **NCDOT**

Name of agent completing questionnaire: **Dave McHenry**

Name of agent's firm: **n/a**

Agent's telephone number: **(828) 246-7078**

Address for correspondence: **253 Webster Road, Sylva, NC 28779**

Applicant's telephone number: (828) 246-7078

Date: 11/12/2020

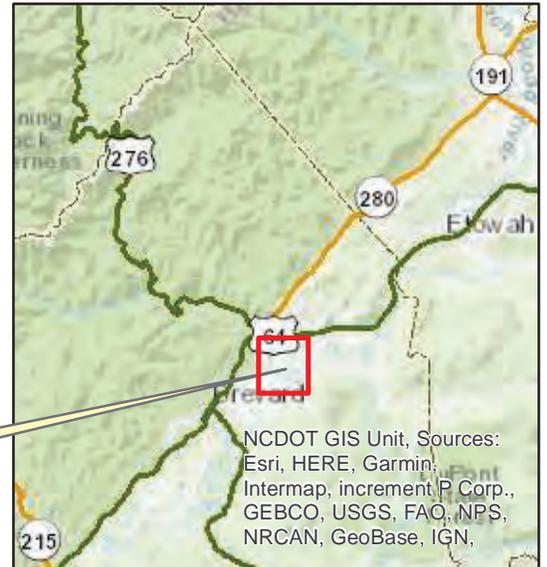
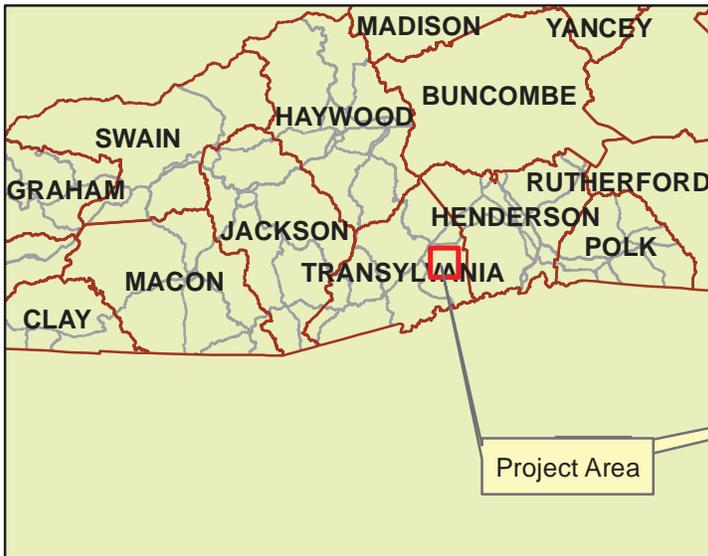
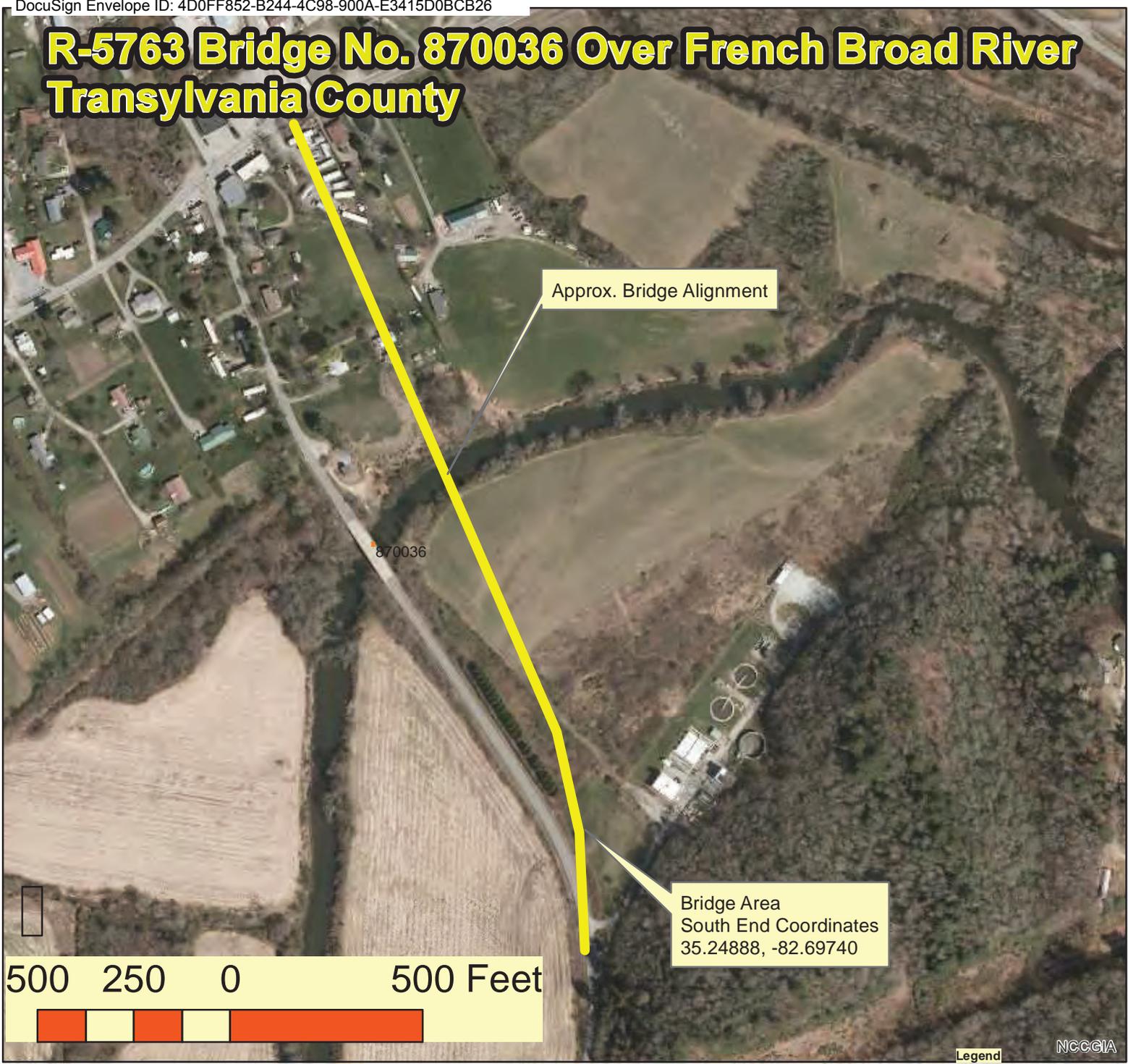
Signature:

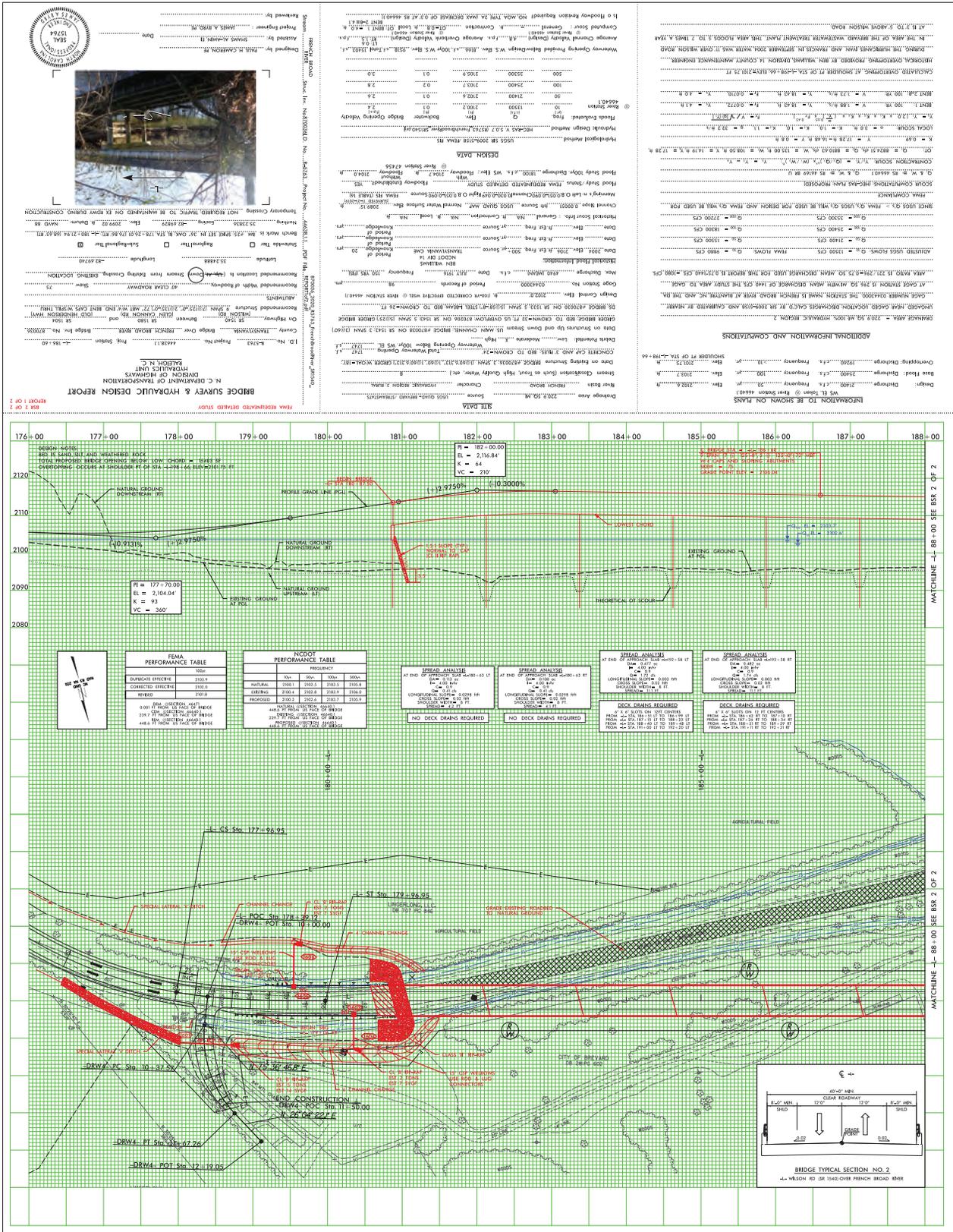
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**PLEASE NOTE: MISSING INFORMATION AND REQUIRED SIGNATURES WILL  
DELAY PROCESSING**

Attachments: Location Map  
Bridge Plans  
Photographs

# R-5763 Bridge No. 870036 Over French Broad River Transylvania County





**BRIDGE SURVEY & HYDRAULIC DESIGN REPORT**  
 N.C. DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 HYDRAULICS UNIT  
 RALEIGH, N.C.

Project No. 18-040  
 Bridge No. 18-040  
 Bridge Type: RIGID  
 Bridge Span: 184.40  
 Bridge Length: 184.40  
 Bridge Inlet: 184.40  
 Bridge Outlet: 184.40

Contract No. 18-040  
 Project No. 18-040  
 Bridge No. 18-040  
 Bridge Type: RIGID  
 Bridge Span: 184.40  
 Bridge Length: 184.40  
 Bridge Inlet: 184.40  
 Bridge Outlet: 184.40

Prepared by: JAMES A. BENTLEY  
 Checked by: JOHN W. CAMPBELL  
 Date: 11/15/18

**DESIGN DATA**

Hydraulic Design Method: HEC-2  
 Bridge Design Velocity: 10.00  
 Flood Elevation: 10.00  
 Right-of-Way: 10.00

Design Flood: 10.00  
 Flood Depth: 10.00  
 Flood Stage: 10.00

Channel Slope: 0.0000  
 Channel Width: 10.00  
 Channel Length: 10.00

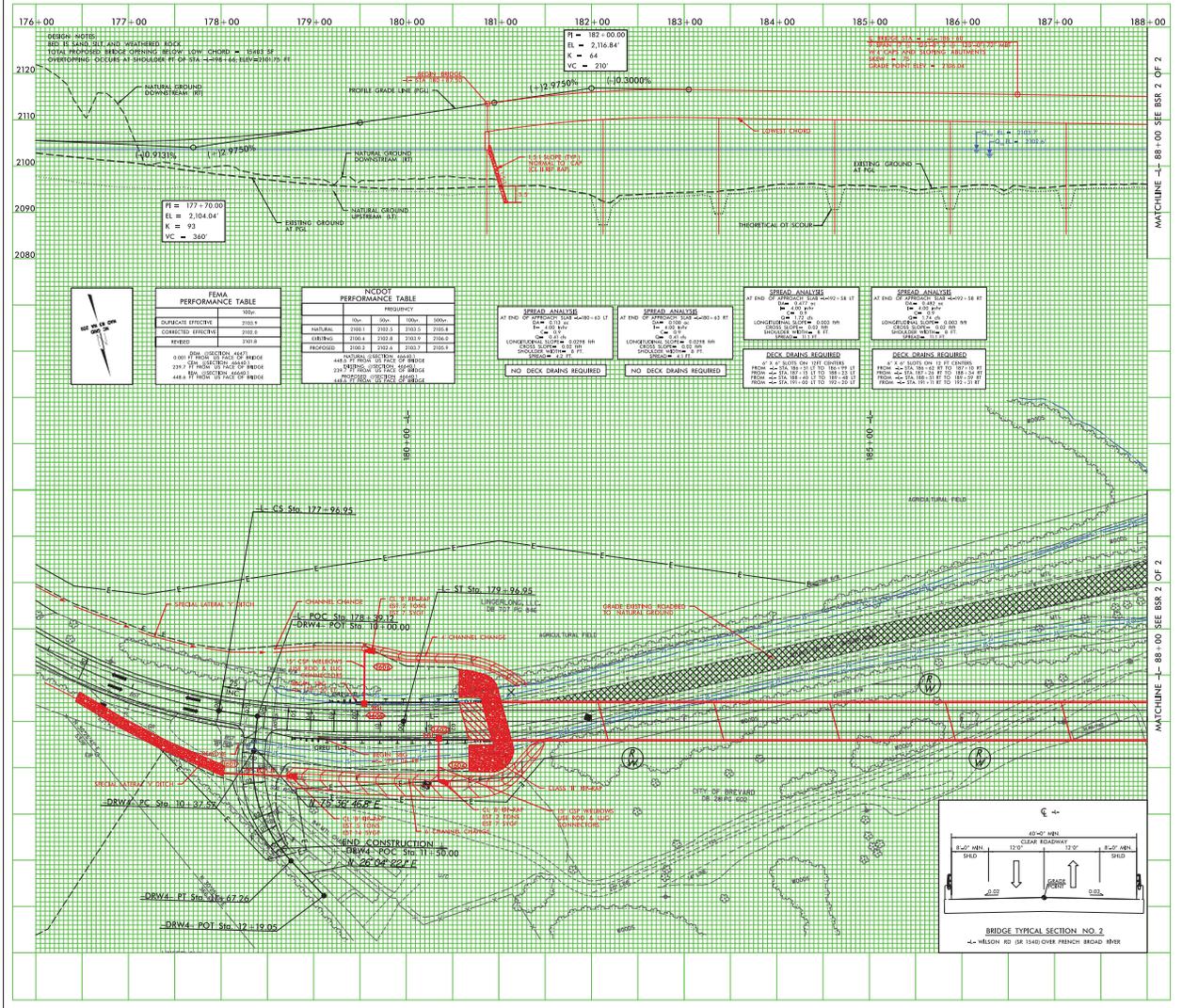
Design Flood: 10.00  
 Flood Depth: 10.00  
 Flood Stage: 10.00

**ADDITIONAL INFORMATION AND COMPUTATIONS**

Design Flood: 10.00  
 Flood Depth: 10.00  
 Flood Stage: 10.00

Channel Slope: 0.0000  
 Channel Width: 10.00  
 Channel Length: 10.00

Design Flood: 10.00  
 Flood Depth: 10.00  
 Flood Stage: 10.00



**FEMA PERFORMANCE TABLE**

PERFORMANCE	100%
DUPPLICATE APPROX.	100%
NATURAL	100%
REMOVED	100%

**NCDOT PERFORMANCE TABLE**

PERFORMANCE	100%
DUPPLICATE APPROX.	100%
NATURAL	100%
REMOVED	100%

**FLOOD ANALYSIS**

AT END OF BRIDGE	AT END OF APPROACH
NO DECK DRAINING REQUIRED	NO DECK DRAINING REQUIRED

MATCHLINE - 188+00 SEE BSR 2 OF 2

MATCHLINE - 177+00 SEE BSR 1 OF 2



STIP Project R-5763  
Concurrence Point 3

## Section 404/NEPA Merger Project Team Meeting Agreement Concurrence Point No. 3 Least Environmentally Damaging Practicable Alternative

Project Name/Description: SR 1540 (Wilson Road) between US 276 and SR 1504 (Old US 64/Old Hendersonville Highway). **STIP Project: R-5763**

**Build Alternative 1** – Realign Wilson Road to intersect with Ecusta Road, creating a four-way intersection. Beginning approximately 0.4 mile south of the northern terminus, this realignment will shift the road, and the bridge over the French Broad River, approximately 260 feet east of the existing road and bridge. The existing bridge and remaining pavement would be removed and the remnant portion of Wilson Road north of the river would be terminated at the French Broad River, allowing for access to businesses, homes, and the river access area.

The Merger Team has concurred on this date of July 15, 2020, on the above Least Environmentally Damaging Practicable Alternative for STIP Project R-5763.

USACE	DocuSigned by: <i>Crystal Amschler</i> 66C05A077D234BC...	
USEPA	DocuSigned by: <i>Amarretta Somerville</i>	
USFWS	DocuSigned by: <i>Janet Maggi</i>	
NCDWR	DocuSigned by: <i>Kevin Mitchell</i>	
NCHPO	DocuSigned by: <i>Renee Gledhill-Earley</i> C26A1556A275464...	

NCDOT	DocuSigned by: <i>Wanda Austin</i>	
NCWRC	B88118F1E31C453... DocuSigned by: <i>Marla Chambers</i>	
Land of Sky RPO	DocuSigned by: <i>Vicki Eastland</i> 4B8C017A560645F...	
Eastern Band of Cherokee Indians		

STIP Project R-5763  
Concurrence Point 4A

## **Section 404/NEPA Merger Project Team Meeting Agreement**

### **Concurrence Point No. 4A**

### **Avoidance and Minimization Measures**

Project Name/Description: SR 1540 (Wilson Road) between US 276 and SR 1504 (Old US 64/Old Hendersonville Highway). **STIP Project: R-5763**

The following is a summary of AMMs as applied to jurisdictional resources to meet the requirements of Sections 404 and 401 of the Clean Water Act.

1. The study area does not extend into the French Broad River as NCDOT has determined that the roadway alignment will be shifted away from the river where necessary to improve horizontal and vertical alignment.
2. The French Broad River provides habitat for the Appalachian elktoe, a federally protected species (endangered), which has been found in the stretch of the river adjacent to Wilson Road. NCDOT is conducting a Biological Assessment (BA) to evaluate the potential effects of this project on the Appalachian elktoe. Based on the BA, the US Fish and Wildlife Service will develop a Biological Opinion (BO), which will be completed prior to the completion of the environmental document.
3. The study area has been minimized to avoid impacts to the French Broad River where it is adjacent to the roadway. The study area is sized to accommodate an improvement of Wilson Road on existing alignment where possible and realignment where necessary to bring the horizontal and vertical alignment up to current design standards.
4. The 2016 Feasibility Study evaluated a new location concept and found it to have substantial additional impacts to the human and natural environment when compared to the proposed upgrade of the existing alignment.
5. Build Alternative 1 and Build Alternative 2 shifted the alignment of the majority of the road away from the French Broad River. Build Alternative 1 replaces the bridge over the French Broad River on new alignment, avoiding the need for an additional temporary bridge, which would have additional impacts.
6. The existing bridges will be replaced with bridges on new location. The bents of the new bridges will be placed outside of the stream channel. The bents of the existing bridges that are in the stream channel will either be removed or cut at the stream bed.
7. Deck drains will not be used on either the bridge over Williamson Creek or the French Broad River, thereby eliminating direct discharge into the creek and river.
8. Based on current designs, the bridge over Williamson Creek will be approximately 265 feet long and the bridge over the French Broad River will be approximately 1,150 feet long to provide the appropriate amount of hydraulic conveyance.
9. NCDOT will use Design Standards in Sensitive Watersheds throughout the project due to the proximity of the project to the French Broad River and crossing of Williamson Creek.
10. The existing culverts in the study area are corrugated metal pipe (CMP) and less than 72 inches and not considered major structures. They will be removed or filled and replaced with appropriately sized pipes that will be realigned with the stream to provide hydraulic conveyance.
11. NCDOT shall require the contractor to use clean stone for the construction of the causeways. This will minimize unnecessary sediment input into the river.

STIP Project R-5763  
Concurrence Point 4A

12. All of the stone used in constructing the causeway will be removed and disposed of off-site, or the stone can be used in areas that require permanent stone protection after project completion.
13. To minimize disturbance to the streambed, care will be taken to remove all readily detectable causeway material to the extent practicable, while removing as little of the original streambed as possible.
14. Construction fabric will not be used under the causeway material, as it tends to shred and litter areas downstream during removal.
15. Equipment that is placed on the causeways will be removed any time throughout a workday when the water level rises, or is expected to rise overnight, to a point where the equipment could be flooded, or during periods of inactivity (two or more consecutive days). The only exception to this measure is that the crane may be left in place for periods of inactivity; however, it must also be removed if the water rises, or is expected to rise, to a point where the crane could be flooded.
16. NCDOT shall commit to requiring its contractor to have clean, non-leaking equipment on the causeway or within the waterway limits; diapers on-site for each causeway; and spill kits located at each causeway.
17. With the exceptions noted below for the crane, all construction equipment will be refueled at least 200 feet from all water bodies and be protected with secondary containment. The crane will be refueled provided spill response materials (such as spill blankets and fueling diapers) are used during the refueling. Hazardous materials, fuel, lubricating oils, or other chemicals will be stored outside the 100-year floodplain or at least 200 feet from all water bodies (whichever distance is greater), not in a Water of the U.S., and preferably at an upland site. Areas used for borrow or construction by-products will not be located within wetlands or the 100-year floodplain.
18. When constructing drilled shafts, if required, a containment system will be developed so that substrate material does not enter the river. Any material by-product will be pumped out of the shaft to an upland disposal area and treated through a proper stilling basin or silt bag.
19. The Sediment and Erosion Control Plan will be in place prior to any ground disturbance. When needed, combinations of erosion control measures (such as silt bags in conjunction with a stilling basin) will be used to ensure that the most protective measures are being implemented.
20. Construction of new bridges will be accomplished in a manner that prevents uncured concrete from coming into contact with water entering or flowing in the river.
21. The Contractor will be required to prosecute the work in a continuous and uninterrupted manner from the time he begins the work until completion of each phase of structure construction, demolition and completion. The Contractor will not be permitted to suspend his operations except for reasons beyond his control or except where the Engineer has authorized a suspension of the Contractor's operations in writing.
22. In the event that the Contractor's operations are suspended in violation of the above provisions or it is determined the Contractor is not deemed to be pursuing the work in a continuous manner in accordance with his submitted and approved schedule, an appropriate amount per day will be charged the Contractor for each and every calendar day that such suspension takes place. The said amount is hereby agreed upon as liquidated damages due to extra engineering and maintenance costs and due to increased public hazard resulting from a suspension of the work. Liquidated damages chargeable due to suspension of the work will be additional to any liquidated damages that may become chargeable due to failure to complete the work on time.

STIP Project R-5763  
Concurrence Point 4A

23. NCDOT will use energy dissipators to reduce the velocity of stormwater prior to entering the French Broad River and other streams.
24. NCDOT will investigate opportunities to use 2:1 slopes at jurisdictional stream crossings as practicable.

The following is a summary of AMMs as applied to the human environment to meet the requirements Sections 404 and 401 of the Clean Water Act.

1. The Feasibility Study analyzed three concepts and determined that:
  - a. Concept 1 – Minor upgrades and improvements using 3R guidelines; did not meet proposed purpose and need of project.
  - b. Concept 2 – Upgrade the road to Major Collector design standards; meets purpose and need and has fewer impacts and is less costly than Option 3
  - c. Concept 3 – Upgrade the road to Principal Arterial design standards; required the road to be realigned on new location, resulting in higher residential relocations and a higher cost.

Therefore, NCDOT recommended Concept 2 be carried forward, which includes adjustments to the horizontal and vertical alignment while retaining current alignment to the extent feasible. This concept became Build Alternative 1.

2. No known FEMA buy-out parcels are located within the study area.
3. Majority of the project is within the 100-year floodplain currently and will remain in the 100-year floodplain in the future.
4. Build Alternative 1 aligns Wilson Road with Ecusta Road, which will improve safety at these two intersections.
5. The Build Alternatives improve Wilson Road in its existing location instead of rerouting the road on new alignment creating substantial impacts to homes and the natural environment.
6. Hydraulic 2D modeling was used to study the potential of the proposed design to impact structures in or near the floodplain. Based on the results of the 2D modeling, the vertical alignment in some locations was raised to prevent overtopping in a 50-year storm event and the French Broad River bridge was extended to cover the entire floodplain.
7. The alignment of the Preferred Alternative will not impact the Knob Creek Properties fly ash disposal site or the Aqua North Carolina well.
8. Build Alternative 1 impacts the fewest residences and businesses when compared to Build Alternative 2, which would have impacted the residences and businesses on existing Wilson Road north of the French Broad River due to replacing the bridge in place.
9. On-site detours will be used under Build Alternative 1.
10. A local ditch section was used on Wilson Road to reduce impacts, instead of the standard, hinged arterial ditch for a roadway of this volume and classification. Using a 6:1 ditch frontslope results in a narrower clear zone which allows for use of a 2:1 backslope. This reduced impacts to properties by requiring fewer acquisitions as well as reducing the amount of cut/fill on the slope.
11. To minimize impacts to the Jenkins House historic property, a retaining wall was used reducing the area requiring tree clearing from 1 acre to 0.7 acre.

STIP Project R-5763  
Concurrence Point 4A

The Merger Team has concurred on this date of July 15, 2020, on the Avoidance and Minimization Measures for STIP Project R-5763.

USACE DocuSigned by:  
*Crystal Amschler*  
66C05A077D234BC...

USEPA *Amanetta Somerville*

USFWS DocuSigned by:  
*Janet Mizzi*

NCWRC DocuSigned by:  
*Marla Chambers*  
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NCDOT DocuSigned by:  
*Wanda Austin*  
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NCDWR *Kevin Mitchell*  
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Land of Sky RPO

Eastern Band of Cherokee Indians

## Wilson Road Meeting Summary

STIP Project No. R-5763 Concurrence Point 3 and 4A Meeting  
Wednesday, July 15, 2020, 1:00 p.m.  
Virtual Meeting

### Meeting Participants

Name	Agency	Email address	Phone
Crystal Amschler	USACE	crystal.c.amschler@usace.army.mil	828-271-7980 ext. 4231
Amanetta Somerville	USEPA	<a href="mailto:somerville.amanetta@epa.gov">somerville.amanetta@epa.gov</a>	404-562-9644
Renee Gledhill-Earley	NC HPO	renee.gledhill-earley@ncdcr.gov	919-814-6579
Kevin Mitchell	NCDWR	<a href="mailto:kevin.mitchell@ncdenr.gov">kevin.mitchell@ncdenr.gov</a>	828-296-4650
Robert Patterson	NCDWR	robert.patterson@ncdenr.gov	919-707-3880
Marla Chambers	NCWRC	marla.chambers@ncwildlife.org	704-984-1070
Vicki Eastland	Land of Sky RPO	<a href="mailto:vicki.eastland@landofsky.org">vicki.eastland@landofsky.org</a>	828-251-7450
Elizabeth Toombs	Cherokee Nation	<a href="mailto:Elizabeth-toombs@cherokee.org">Elizabeth-toombs@cherokee.org</a>	
Garrett Higdon	NCDOT – Division 14	<a href="mailto:gbhigdon@ncdot.gov">gbhigdon@ncdot.gov</a>	828-586-2141
Barry Mosteller	NCDOT – Division 14	<a href="mailto:bdmosteller@ncdot.gov">bdmosteller@ncdot.gov</a>	828-586-2141
Wanda Austin	NCDOT – Division 14	<a href="mailto:whaustin@ncdot.gov">whaustin@ncdot.gov</a>	828-631-1142
Josh Deyton	NCDOT – Division 14	<a href="mailto:jbdeyton@ncdot.gov">jbdeyton@ncdot.gov</a>	828-586-2141
Dave McHenry	NCDOT – Division 14	<a href="mailto:dgmchenry@ncdot.gov">dgmchenry@ncdot.gov</a>	828-586-2141
Kevin Barnett	NCDOT – Division 14	kbarnett@ncdot.gov	828-586-2141
Mike Sanderson	NCDOT – Environmental Policy Unit	<a href="mailto:jmsanderson@ncdot.gov">jmsanderson@ncdot.gov</a>	919-707-6154
John Jamison	NCDOT – Environmental Policy Unit	<a href="mailto:johnjamison@ncdot.gov">johnjamison@ncdot.gov</a>	919-707-6140
Jon Moore	NCDOT – Hydraulics	jmoore6@ncdot.gov	919-707-6738
Mark Staley	NCDOT – REU	mstaley@ncdot.gov	919-707-2948
Kat Bukowy	HNTB	kbukowy@hntb.com	919-424-0441
James Byrd	HNTB	jabyrd@hntb.com	919-424-0437
Roy Tellier	HNTB	<a href="mailto:rtellier@hntb.com">rtellier@hntb.com</a>	919-424-0428
Joe Olson	HNTB	<a href="mailto:jsolson@hntb.com">jsolson@hntb.com</a>	919-424-0480
Ken Gilland	HNTB	<a href="mailto:kgilland@hntb.com">kgilland@hntb.com</a>	919-424-0486
Jim Mason	Three Oaks Engineers	james.mason@threeoaksengineers.com	919-732-1300
Nancy Oberle	Three Oaks Engineers	nancy.oberle@threeoaksengineers.com	919 732 1300

### Meeting Summary

This meeting was held for Concurrence Points 3 (CP3) – Least Environmentally Damaging Practicable Alternative (LEDPA) – and CP 4A – Avoidance and Minimization Measures. The US Army Corps of Engineers, represented by Crystal Amschler, is the lead federal agency for the subject project. Garrett Higdon, NCDOT Division 14, is the NCDOT Project Manager. Kat Bukowy, HNTB, led the presentation and discussion. The following is a summary of the salient points of the meeting.

The PowerPoint presentation reviewed the project; purpose and need as agreed to at CP 1; detailed study alternatives chosen at CP 2; and an update of the proposed bridge lengths of the bridges over the French Broad River and Williamson Creek agreed to at CP 2A. The project alignment was also revised following the CP 2A meeting. A 2D hydraulic analysis determined that the proposed design still overtopped in the 50-year storm event and therefore the vertical alignment was increased. In addition,

to improve constructability while maintaining access the alignment of Wilson Road was shifted to the west just north of Elm Bend Road. The USACE and Cherokee Nation asked if any archaeological sites would be affected by the alignment shift. HNTB confirmed that there are no known archaeological sites in this area to be affected. The potential impacts of the Build Alternative to the natural and human environment were reviewed.

HNTB presented the two alternatives for consideration of the Least Environmentally Damaging Practicable Alternative (LEDPA), noting that the Build Alternative meets the purpose and need of the project and is NCDOT’s Preferred Alternative. The USACE concurred with the recommendation of the Build Alternative as the LEDPA followed by the other signatories.

HNTB moved to addressing the Avoidance and Minimization Measures, CP 4A. The avoidance and minimization measures have been documented through the life of the project. New avoidance and minimization measures predominantly center around commitments that NCDOT has made to minimize impacts to the Appalachian elktoe during construction (404 and 401 CWA measure numbers 6, 7, 9-23). To provide some amount of flexibility in contracting, measure #22 has been changed to the yellow highlighted text from \$1,000.

- 22. In the event that the Contractor’s operations are suspended in violation of the above provisions or it is determined the Contractor is not deemed to be pursuing the work in a continuous manner in accordance with his submitted and approved schedule, **an appropriate amount** per day will be charged the Contractor for each and every calendar day that such suspension takes place. The said amount is hereby agreed upon as liquidated damaged due to extra engineering and maintenance costs and due to increased public hazard resulting from a suspension of the work. Liquidated damages chargeable due to suspension of the work will be additional to any liquidated damages that may become chargeable due to failure to complete the work on time.

NCDWR, USACE, et al. asked if a commitment to 2:1 slopes at jurisdictional stream crossings could be made. HNTB explained that each crossing would need to be reviewed individually. In some locations these slopes would require additional guard rail, which may lead to safety conflicts. NCDOT agreed to the following commitment:

- 24. NCDOT will investigate opportunities to use 2:1 slopes at jurisdictional stream crossings as practicable.

This investigation will be presented and discussed at CP 4B.

With the aforementioned discussion and changes to the avoidance and minimization measures the USACE stated their concurrence with the avoidance and minimization measures, followed by the other Merger signatories.

HNTB will reach out to USFWS to determine if they will provide concurrence for CP 3 and CP 4A. HNTB will send out the concurrence forms via DocuSign for signature.

<b>STIP Project R-5763 Milestone Targets</b>	
<b>Milestone</b>	<b>Schedule*</b>
Concurrence Point 3/4A	July 15, 2020
Biological Assessment	July 2020
Biological Opinion	Fall 2020
State EA/FONSI	Fall 2020
Concurrence Point 4B	September 2020
Begin ROW Acquisition	FY 2021

<b>STIP Project R-5763 Milestone Targets</b>	
<b>Milestone</b>	<b>Schedule*</b>
Begin Construction	FY 2023
*tentative, subject to change;	

UPDATED 18-01-0032
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## HISTORIC ARCHITECTURE AND LANDSCAPES ASSESSMENT OF EFFECTS FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

### PROJECT INFORMATION

<b>Project No:</b>	R-5763	<b>County:</b>	Transylvania
<b>WBS No.:</b>	44638.1.1	<b>Document Type:</b>	State EA/FONSI
<b>Fed. Aid No:</b>		<b>Funding:</b>	<input checked="" type="checkbox"/> State <input type="checkbox"/> Federal
<b>Federal Permit(s):</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>Permit Type(s):</b>	USACE

**Project Description:**

Upgrade Wilson Road from US 276 to Old US 64/Old Hendersonville Highway by moving it out of the 50-year floodplain, improving the horizontal and vertical alignments, and realigning the road with Ecusta Road, on new location, approximately 3.6 miles. The project will widen the two-lane facility from its current 9-foot lanes to 11-foot lanes with 8-foot shoulders, 4 feet of which will be paved.

### SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

**Description of review activities, results, and conclusions:**

Project area reviewed on HPOWeb and in the field in February 2018 and several properties required evaluation for eligibility in the National Register of Historic Places. A report was prepared and sent to the State Historic Preservation Office. As a result of the consultation, there are three properties within the APE that are eligible for the National Register. The USACE reviewed the project scope and determined that, “based on location of all waters throughout the project and the extend of federal control, we would federalize the entire corridor. As such, any historic resources that occur within the corridor would be within our permit review area.” The project effects were first reviewed in September 2020, but the project area was expanded to include a roundabout on Old Henderson Highway at Ecusta Road and realignment of Wilson Road. This was reviewed in July 2021 and the findings are reflected in this form.

### ASSESSMENT OF EFFECTS

<b>Property Name:</b>	Pisgah Forest US Postal Office	<b>Status:</b>	Determined eligible, Criteria A & C
<b>Survey Site No.:</b>	TV0662	<b>PIN:</b>	8596-57-3992-000
<b>Effects</b>			
<input type="checkbox"/> No Effect <input checked="" type="checkbox"/> No Adverse Effect <input type="checkbox"/> Adverse Effect			

**Explanation of Effects Determination:**

In September 2020 there were no construction activities within historic property boundary however, the proposed roundabout shown in July 2021 does include some road improvements adjacent to the historic property boundary. There are no changes in access or impacts to parking.

**List of Environmental Commitments:**

None

<b>Property Name:</b>	Elizur Patton House	<b>Status:</b>	Determined eligible, Criterion C
<b>Survey Site No.:</b>	TV0662	<b>PIN:</b>	8596-57-3992-000

**Effects**

No Effect

No Adverse Effect

Adverse Effect

**Explanation of Effects Determination:**

In September 2020 this property was considered outside the APE for this project but the proposed roundabout shown in July 2021 does bring this property into the APE. Along the southeast boundary of the property 0.022 acres of temporary construction easement and 0.027 acres of new ROW will be required to accommodate cut and fill. A large tree at the corner of the property will be protected during construction

**List of Environmental Commitments:**

Tree protection measures installed before and during construction at the southeast corner of the property.

<b>Property Name:</b>	Glen Cannon Country Club	<b>Status:</b>	Determined eligible, Criteria A & C
<b>Survey Site No.:</b>	TV0664	<b>PIN:</b>	8596-60-7378-000

**Effects**

No Effect

No Adverse Effect

Adverse Effect

**Explanation of Effects Determination:**

No construction activities within historic property boundary and will not impact setting or viewshed. In fact, road moved away from historic golf course and historic sign not impacted by road project.

**List of Environmental Commitments:**

None

<b>Property Name:</b>	Mary & Albert Jenkins House	<b>Status:</b>	Determined eligible, Criterion C
<b>Survey Site No.:</b>	TV0211	<b>PIN:</b>	8595-35-8439-000

**Effects** No Effect No Adverse Effect Adverse Effect**Explanation of Effects Determination:**

Proposed project shifts the road toward the Mary and Albert Jenkins House, requiring removal of a substantial number of trees and shrubs along the northwestern edge of the boundary and eliminating access to an impassable driveway from of Wilson Road. Current access is an unimproved turn-off of Three Mile Knob Road. HPO agreed that the impassable driveway did not contribute to the historic significance of the property and expressed greater concern regarding the proposed drainage design, and the amount of riprap proposed parallel to Wilson Road. HPO asked that the hydraulic opening on Wilson Road be sized to work property whilst reducing the amount of rip rap required on the Jenkins property and that screening (plants/trees) be provided. NCHPO and USACE agreed that with these two options a "No Adverse Effect" with environmental commitments is the appropriate finding.

\*\* Further evaluation of the site determined that one 66" inlet pipe within the jurisdictional feature with equally split outflow best meets the hydraulics needs in this area. The 66" pipe conveyance is split evenly between a 48" inch system pipe that outfalls into the French Broad River upstream of the historic resource and a 54" cross pipe that will convey normal flow to the pond across Wilson Road. The 66" inlet pipe to 54" cross pipe connection will be buried 1' over the length shown while the invert of the 48" pipe out has been set to match the buried flow depths within the cross pipe. This design will maintain the stability and integrity of the pond across Wilson Rd while also providing improved hydraulic efficiency of the overall area. Furthermore, the redesigned system eliminates the rip rap ditch (approximately 224 Tons Class I Rip Rap, 480 Cubic Yards drainage ditch excavation (DDE)) that was parallel to Wilson Road. Rip rap (approximately 67 Tons Class I Rip Rap, 100 cubic yards DDE) will still be required for stream bank stabilization within the jurisdictional feature to prevent erosion due to in-stream slope of 12.8 percent

**List of Environmental Commitments:**

NCDOT will contact the property owner and seek their consent to providing an improved access from Three Mile Knob Road and ask if they want landscape screening installed along the edges of the proposed rip rap. If so desired, NCDOT will improve the current driveway off Three Mile Knob Road, install the screening, and guarantee the plants' survival for two years.

**SUPPORT DOCUMENTATION**

Map(s)     Previous Survey Info.     Photos     Correspondence     Design Plans

## FINDING BY NCDOT AND STATE HISTORIC PRESERVATION OFFICE

### Historic Architecture and Landscapes – ASSESSMENT OF EFFECTS

DocuSigned by: <i>Mary Pope Furr</i> ED3110443890489	7/23/2021
NCDOT Architectural Historian	Date
DocuSigned by: <i>Renee Gledhill-Earley</i> C26A1556A275464...	7/26/2021
State Historic Preservation Office Representative	Date
DocuSigned by: <i>Crystal Amschler</i> 66C05A077D234BC...	7/27/2021
Federal Agency Representative	Date

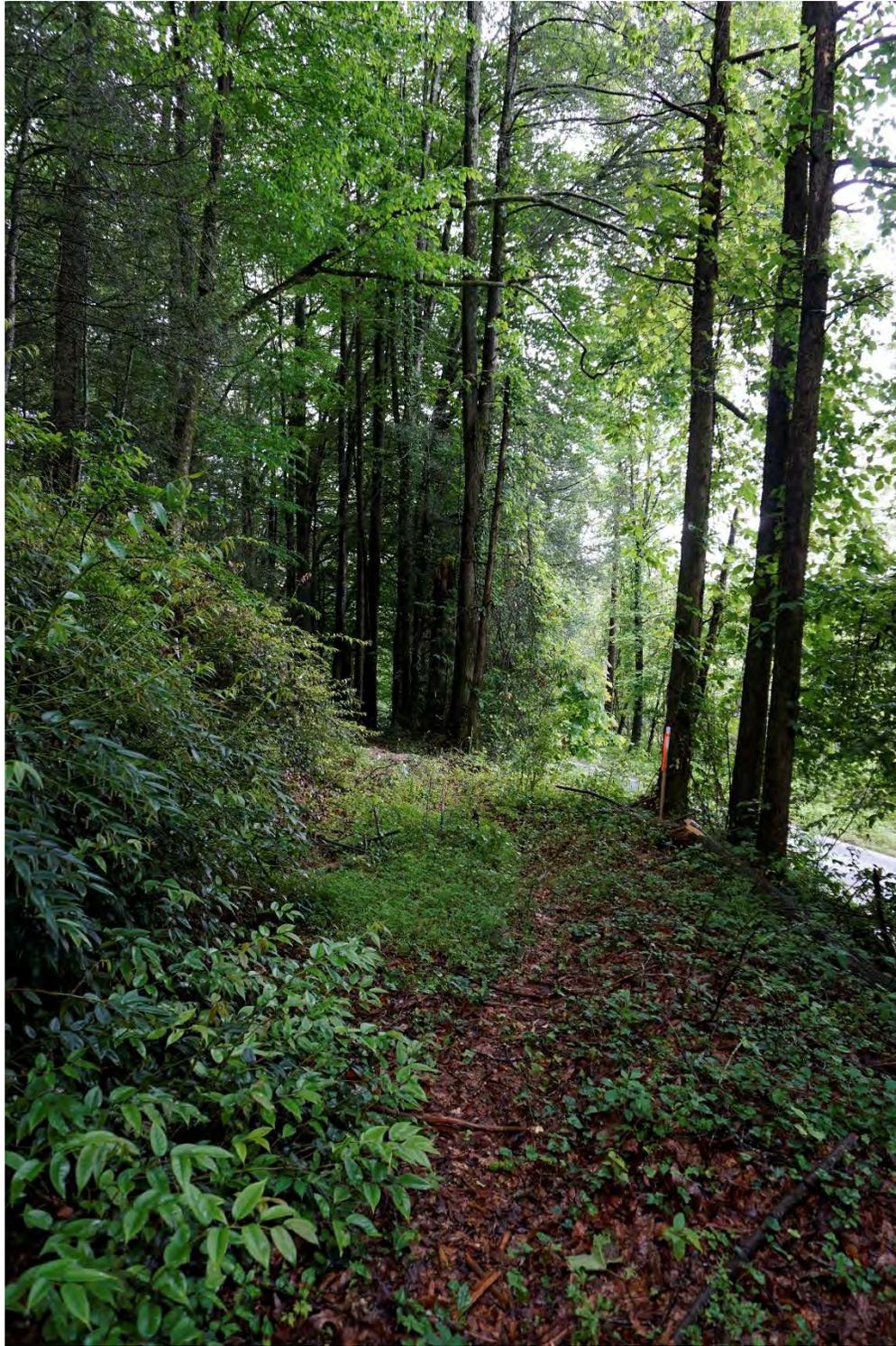
**Photos of Jenkins House**



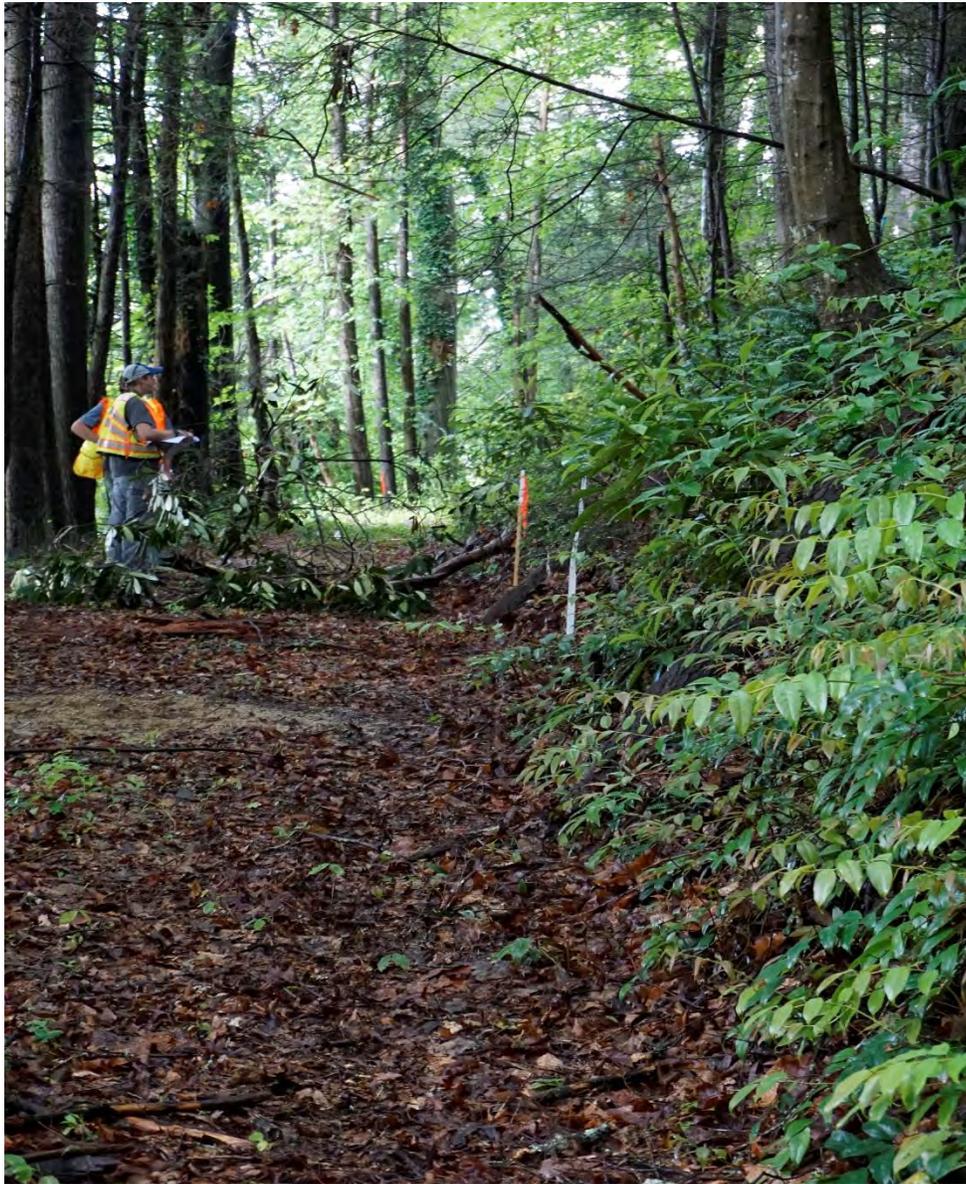
Current access off Three Mile Knob Road



View of road from front porch – area of future cross pipe



Abandoned driveway off Wilson Road

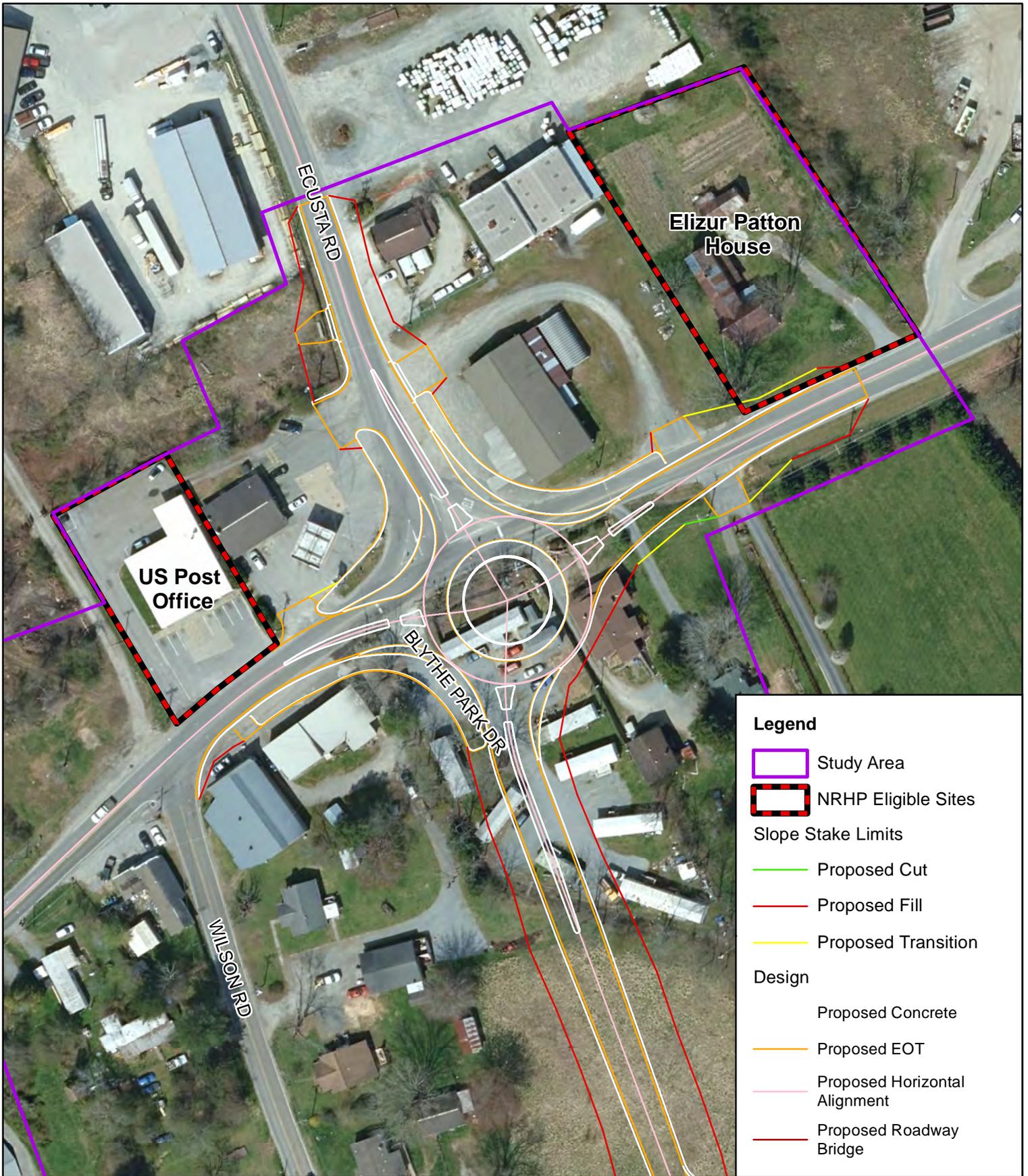


Stakes along abandoned driveway

**Elizur Patton House**

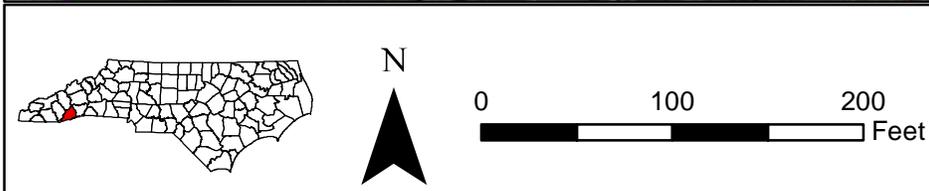


Tree to be protected



**Legend**

- Study Area
- NRHP Eligible Sites
- Slope Stake Limits
- Proposed Cut
- Proposed Fill
- Proposed Transition
- Design
  - Proposed Concrete
  - Proposed EOT
  - Proposed Horizontal Alignment
  - Proposed Roadway Bridge



Data Source: HNTB, Transylvania Co GIS, NCDOT  
HNTB, June 2021

**FIGURE 1**  
ROUNDBOUT and  
HISTORIC ARCHITECTURE  
STIP Project No. R-5763  
Improvements to Wilson Road from US 276  
to Old US 64/Old Hendersonville Hwy  
Brevard, Transylvania County

# POST OFFICE

PISGAH FOREST PO, LLC  
DB 780 PG 837

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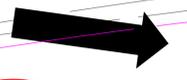
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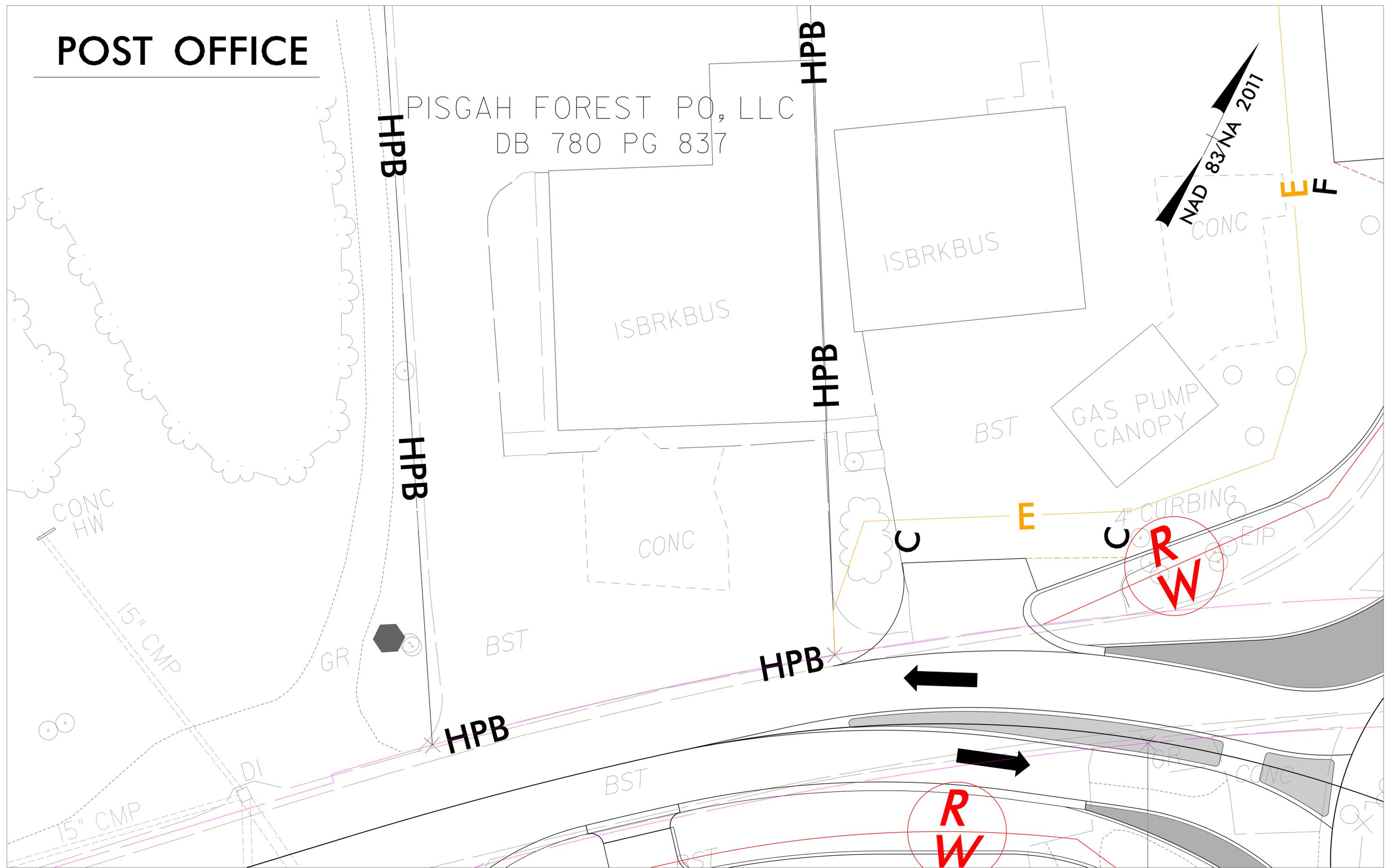
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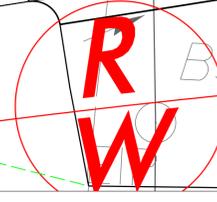
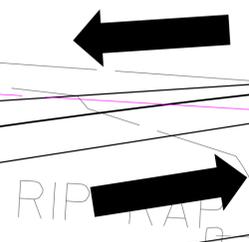
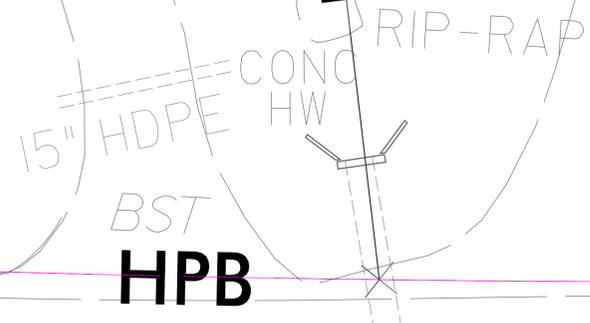
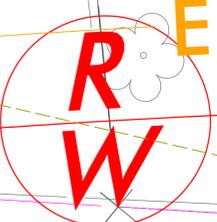
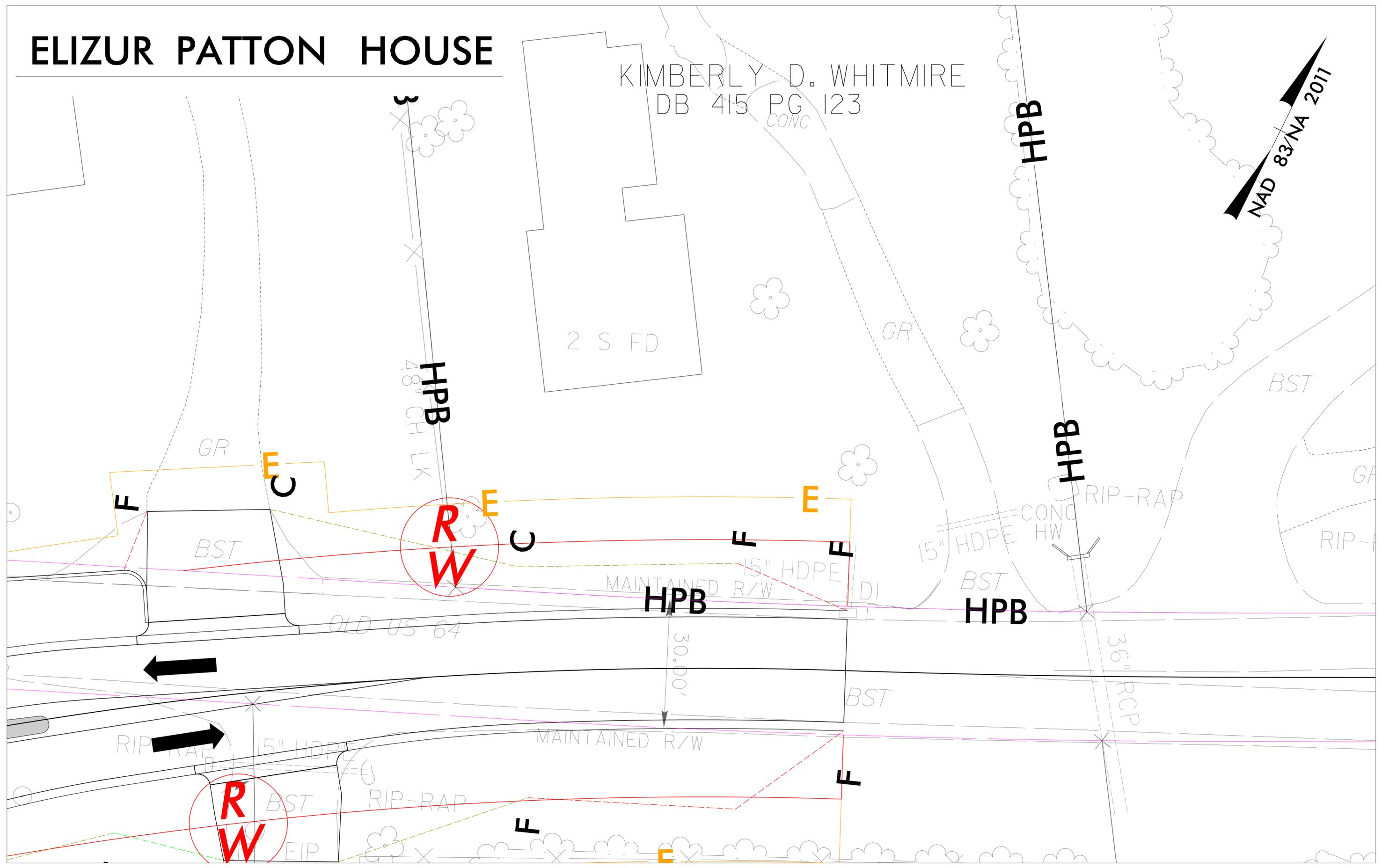
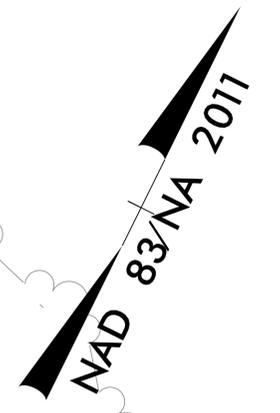
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15" CMP



# ELIZUR PATTON HOUSE

KIMBERLY D. WHITMIRE  
DB 415 PG 123



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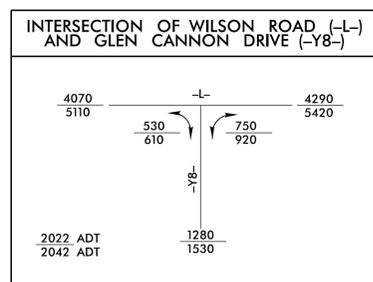
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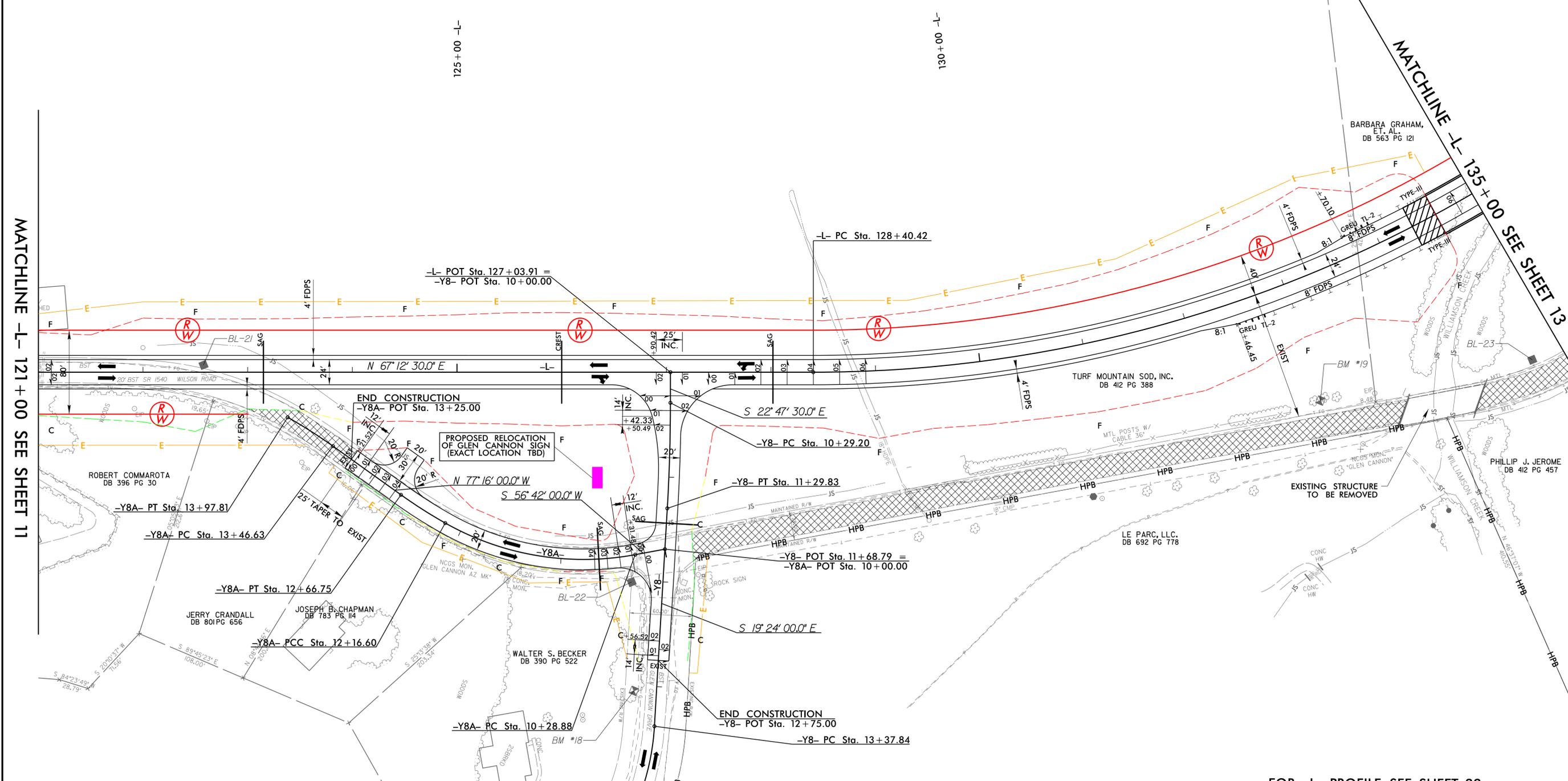
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PI Sta 132+58.36	PI Sta 10+79.53	PI Sta 14+43.08
$\Delta = 36^\circ 58' 30.0''$ (LT)	$\Delta = 3^\circ 23' 30.0''$ (RT)	$\Delta = 49^\circ 19' 38.8''$ (RT)
$D = 4^\circ 35' 01.2''$	$D = 3^\circ 22' 13.2''$	$D = 25^\circ 00' 00.0''$
$L = 806.67'$	$L = 100.63'$	$L = 197.31'$
$T = 417.94'$	$T = 50.33'$	$T = 105.24'$
$R = 1,250.00'$	$R = 1,700.00'$	$R = 229.18'$
$e = 6\%$	$e = NC$	$e = EXIST$
$RO = 150'$	$RO = N/A$	$RO = N/A$
	-Y8A-	
PI Sta 11+26.73	PI Sta 12+41.70	PI Sta 13+72.24
$\Delta = 39^\circ 53' 22.4''$ (RT)	$\Delta = 6^\circ 08' 37.6''$ (RT)	$\Delta = 6^\circ 08' 32.4''$ (LT)
$D = 21^\circ 15' 00.0''$	$D = 12^\circ 15' 00.0''$	$D = 12^\circ 00' 00.0''$
$L = 187.72'$	$L = 50.15'$	$L = 51.19'$
$T = 97.84'$	$T = 25.10'$	$T = 25.62'$
$R = 269.63'$	$R = 467.72'$	$R = 477.46'$
$e = NC$	$e = NC$	$e = EXIST$
$RO = N/A$	$RO = N/A$	$RO = N/A$



**HNTB** HNTB NORTH CAROLINA, P.C.  
 343 E. Six Forks Road, Suite 200  
 Raleigh, North Carolina 27609  
 NC License No: C-1554

PROJECT REFERENCE NO. <b>R-5763</b>	SHEET NO. <b>12</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	

PAVEMENT REMOVAL



MATCHLINE -L- 121+00 SEE SHEET 11

MATCHLINE -L- 135+00 SEE SHEET 13

**NOTE:**  
 1. ALL DRIVEWAYS HAVE 10' RADII UNLESS OTHERWISE NOTED.

FOR -L- PROFILE, SEE SHEET 22  
 FOR -Y8- PROFILE, SEE SHEET 26  
 FOR -Y8A- PROFILE, SEE SHEET 26  
 FOR INTERSECTION DETAIL, SEE SHEET 2B-4

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18-01-0032



## NO NATIONAL REGISTER OF HISTORIC PLACES ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES AFFECTED FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Team.



### PROJECT INFORMATION

**Project No:** R-5763 Update      **County:** Transylvania  
**WBS No:** 44638.1.1      **Document:** MCC  
**F.A. No:**      **Funding:**  State       Federal  
**Federal Permit Required?**       Yes       No      **Permit Type:** USACE

#### **Project Description:**

Upgrade of SR 1540 (Wilson Road) from SR 1504 (Old US 64) to US 276 in Transylvania County, North Carolina. The archaeological Area of Potential Effects (APE) measures 3.60 miles in length and 400 ft. in width (200 ft. from each side of the existing SR 1540 center line). The updated APE encompasses a small area at the very northern extent of the original APE. It measures approximately 13.5 acres in area and is largely disturbed.

#### **SUMMARY OF ARCHAEOLOGICAL FINDINGS**

***The North Carolina Department of Transportation (NCDOT) Archaeology Team has reviewed the subject project and determined:***

- There are no National Register listed ARCHAEOLOGICAL SITES within the project's area of potential effects. (Attach any notes or documents as needed)
- There are National Register listed ARCHAEOLOGICAL SITES within the project's area of potential effects. (Attach any notes or documents as needed).
- Subsurface investigations did not reveal the presence of any archaeological resources.
- Subsurface investigations did not reveal the presence of any archaeological resources considered eligible for the National Register.
- All identified archaeological sites located within the APE have been considered and all compliance for archaeological resources with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.

#### ***Brief description of review activities, results of review, and conclusions:***

Review of the Survey Results for the Original Study Area

TRC Environmental Corporation (TRC) conducted an intensive archaeological survey and evaluation for the proposed upgrade of SR 1540 (Wilson Road) from SR 1504 (Old US 64) to US 276 in Transylvania County, North Carolina. The fieldwork was carried out from August 13 to September 14, 2018 and was directed by Michael Nelson, with the assistance of field technicians Rachael Denton, Tommy Garrow, Sterling Howard, Erin Warren, and Isaac Webb. An NCDOT review, supplemented by research performed by TRC in the North Carolina state site files, indicated that there had been no previous systematic archaeological investigations and no sites previously recorded within the APE for archaeology, although several sites have been recorded adjacent to the APE.

18-01-0032

The survey identified 12 previously unidentified archaeological resources within the project APE, including four sites (31TV1089–31TV1092), a historic period family cemetery (31TV1093), and seven isolated finds (31TV1094–31TV1100) (Table 1; Figures 1–6). Three of the sites (31TV1089, 31TV1091, and 31TV1092) and the cemetery (31TV1093) likely extend outside the current project APE. Sites 31TV1089–31TV1091 are multi-component sites that are represented by both prehistoric lithic and ceramic artifacts as well as 19th to 20th century period historic artifacts, while site 31TV1092 is a low-density site with both prehistoric and historic period ceramic artifacts. The small family cemetery, 31TV1093, contains at least 14 graves marked by fieldstones, one of which also has a modern marker. Sites 31TV1094, 31TV1095, 31TV1097 and 31TV1098 are all isolated occurrences of non-diagnostic lithic debitage, while sites 31TV1096, and 31TV1099 are represented by 19th to 20th century artifacts recovered from single shovel test locations. Finally, site 31TV1100 is identified by a single prehistoric ceramic sherd and may be associated with previously recorded site 31TV610, which is mapped north and west of the project corridor. All 12 of the identified resources are recommended not eligible for the National Register of Historic Places (NRHP) under all four NRHP criteria as expressed within the project APE, although the historic cemetery (31TV1093) is protected by North Carolina state statutes and should be avoided. In addition, in the event that the APE changes, additional survey and/or site evaluation may be necessary to further investigate sites 31TV1089, 31TV1090, 31TV1091, and/or 31TV1092.

Several small portions of the APE could not be surveyed due to lack of landowner permission, as shown in Figures 3–6. Survey is recommended for the small, unsurveyed area along the east side of site 31TV1089 (Figure 3) if it is to be affected by the project, but no additional attempts to survey the remaining unsurveyed areas are recommended.

#### Expanded APE Archaeological Review December 2021

In early December 2021, a new archaeological review request was made for the project which entailed a relatively small, 13.5 acre study area in which a round about traffic feature will be constructed at the northern limits of the original APE. The very southern portion of the new APE was previously surveyed during the original APE documentation and subsumes a small field, a few houses, and several trailer homes. In terms of the condition of the new APE, it is heavily disturbed from commercial and home-owner utilization and alteration. Much of the APE is covered by houses, parking lots or other impervious features. The only interesting historic feature within the new APE is the Elizur Patton House, a NRHP eligible property as determined by the Architectural Historians. This house was recorded as an archaeological site in 1993 by Ruth Wetmore. Its archaeological significance remains unassessed as the resource was not included in the original SR 1540 APE. Based on the extremely small area of potential impact to the property, a terrestrial survey of this historic property is not recommended. Less than 1/10 of an acre in size, and located completely within the existing disturbed Hendersonville Hwy/Old US 64 right-of-way corridor, the potential impact area is unlikely to contain intact, preserved, or significant archaeological remains related to the Elizur Patton House. Avoidance of all areas beyond the existing Hendersonville Highway right of way in the vicinity of the NRHP eligible property is recommended. A relatively non-disturbing subsurface fencing should be used in order to separate the disturbed right-of-way from the remainder of the NRHP property. As currently proposed, no additional archaeological survey of the project study area and APE is recommended. Should an easement or any construction work occur in the Elizur Patton parcel of land, archaeological monitoring is also recommended.

18-01-0032

*(This project falls within a North Carolina County in which the following federally recognized tribes have expressed an interest: Cherokee Nation of Oklahoma, Eastern Band of Cherokee Indian, United Keetoowah Band of Cherokee Indians and the Muscogee Nation. We recommend that you ensure that this documentation is forwarded to these tribes using the process described in the current NCDOT Tribal Protocol and PA Procedures Manual.)*

**SUPPORT DOCUMENTATION**

See attached:  Map(s)     Previous Survey Info     Photos     Correspondence

Other:

Signed:

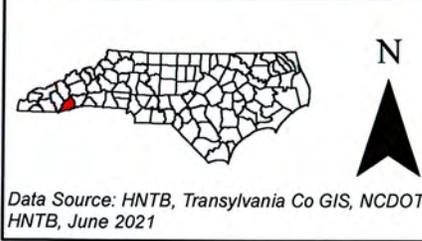
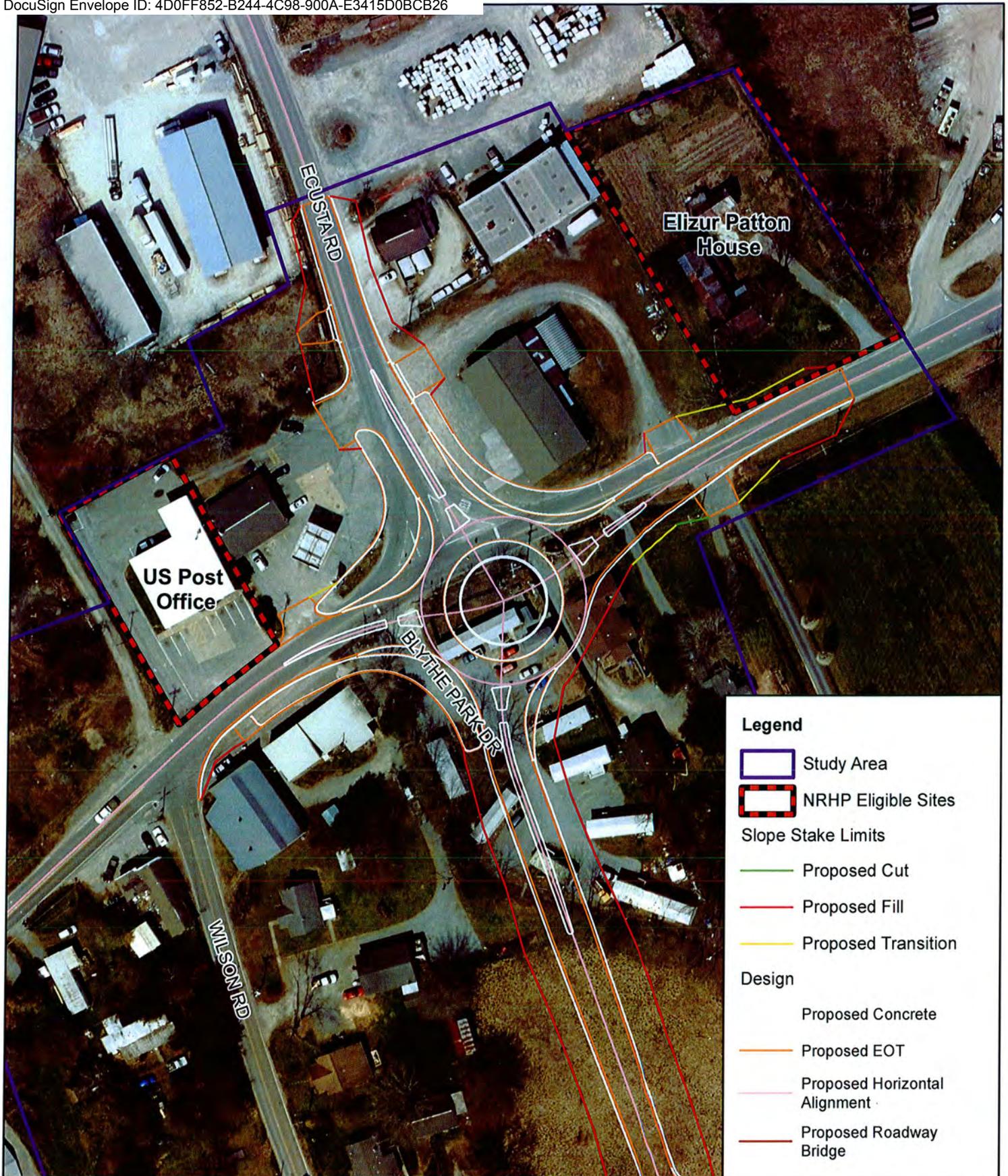
**SCOTT HALVORSEN**



**12-3-2021**

NCDOT ARCHAEOLOGIST

Date



**FIGURE 1**  
ROUNDABOUT and  
HISTORIC ARCHITECTURE  
STIP Project No. R-5763  
Improvements to Wilson Road from US 276  
to Old US 64/Old Hendersonville Hwy  
Brevard, Transylvania County



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

ARC-GIS aerial shape file map illustrating the location and boundaries of the original archaeological Area of Potential Effects (APE) surveyed for cultural resources in 2013 (in red) and the updated 2018 expanded APE (yellow polygon) in Transylvania County, North Carolina.

**18-01-0032**  
Extended APE Resubmit

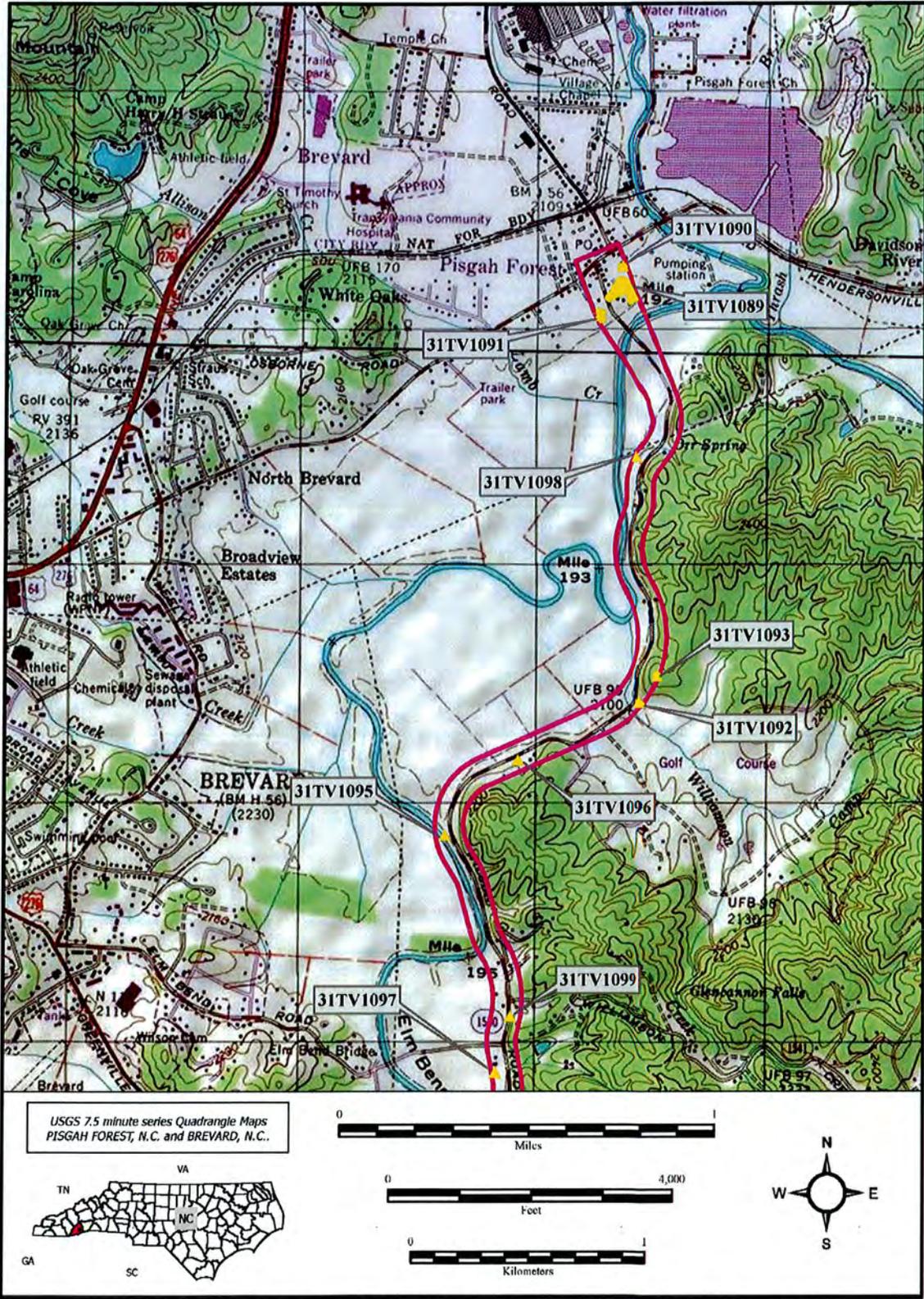


Figure 1. Location of the Wilson Road (SR 1540) project corridor and newly identified archaeological sites in Transylvania County, North Carolina (northern section).

*"NO NATIONAL REGISTER ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES PRESENT OR AFFECTED  
form for Minor Transportation Projects as Qualified in the 2007 Programmatic Agreement.*

**18-01-0032**  
Extended APE Resubmit

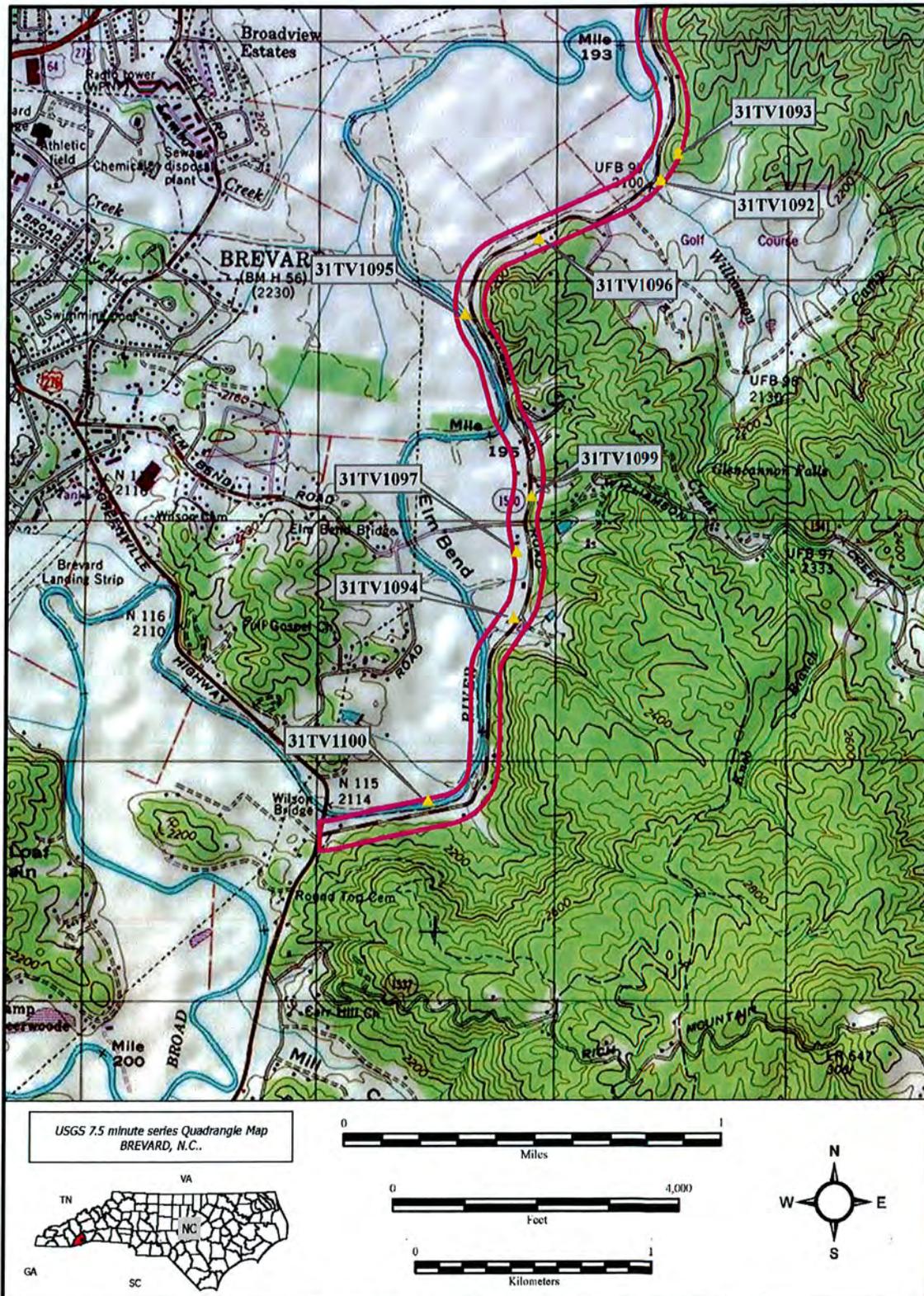


Figure 2. Location of the Wilson Road (SR 1540) project corridor and newly identified archaeological sites in Transylvania County, North Carolina (southern section).

*"NO NATIONAL REGISTER ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES PRESENT OR AFFECTED  
form for Minor Transportation Projects as Qualified in the 2007 Programmatic Agreement.*

**18-01-0032**  
Extended APE Resubmit

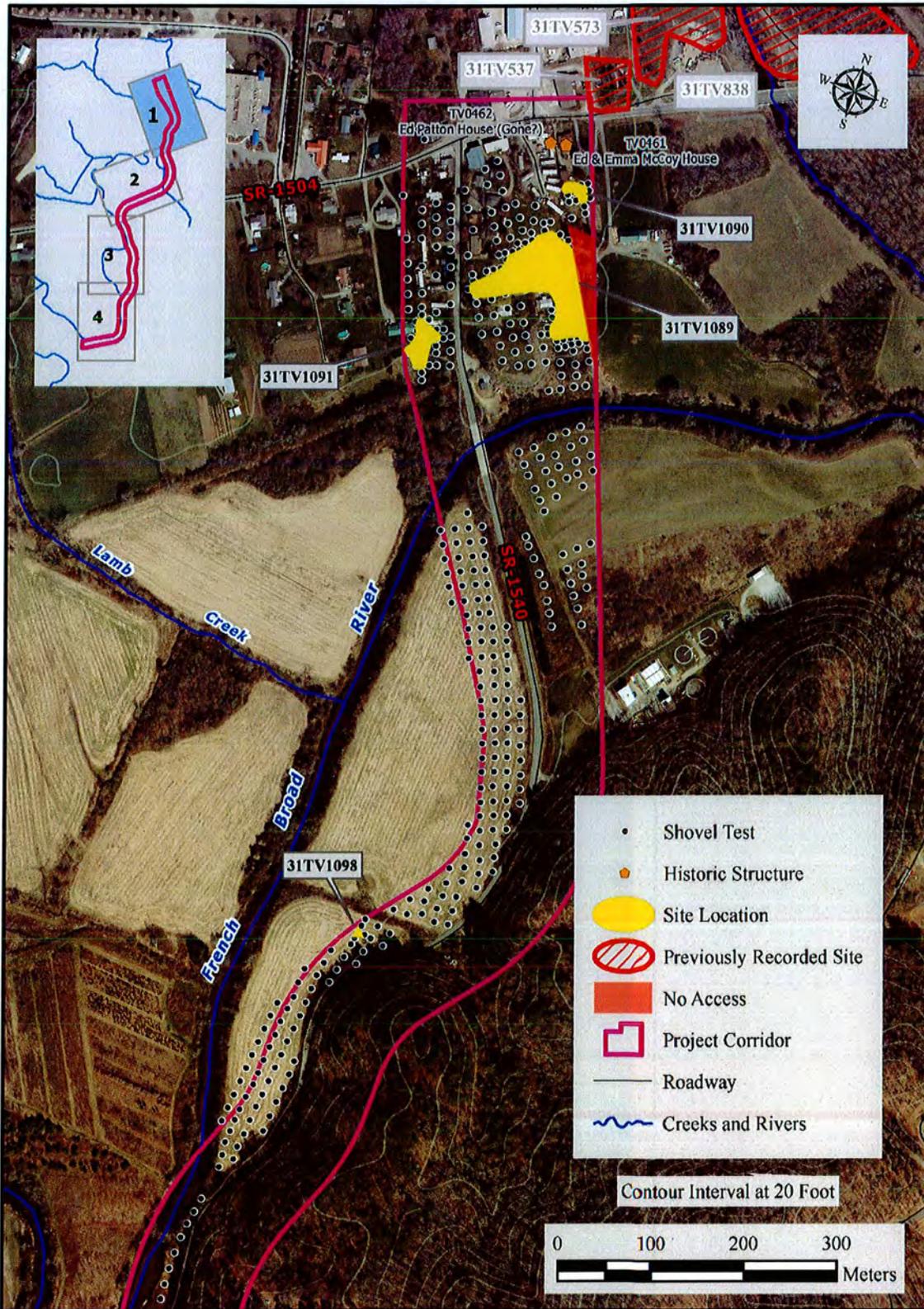
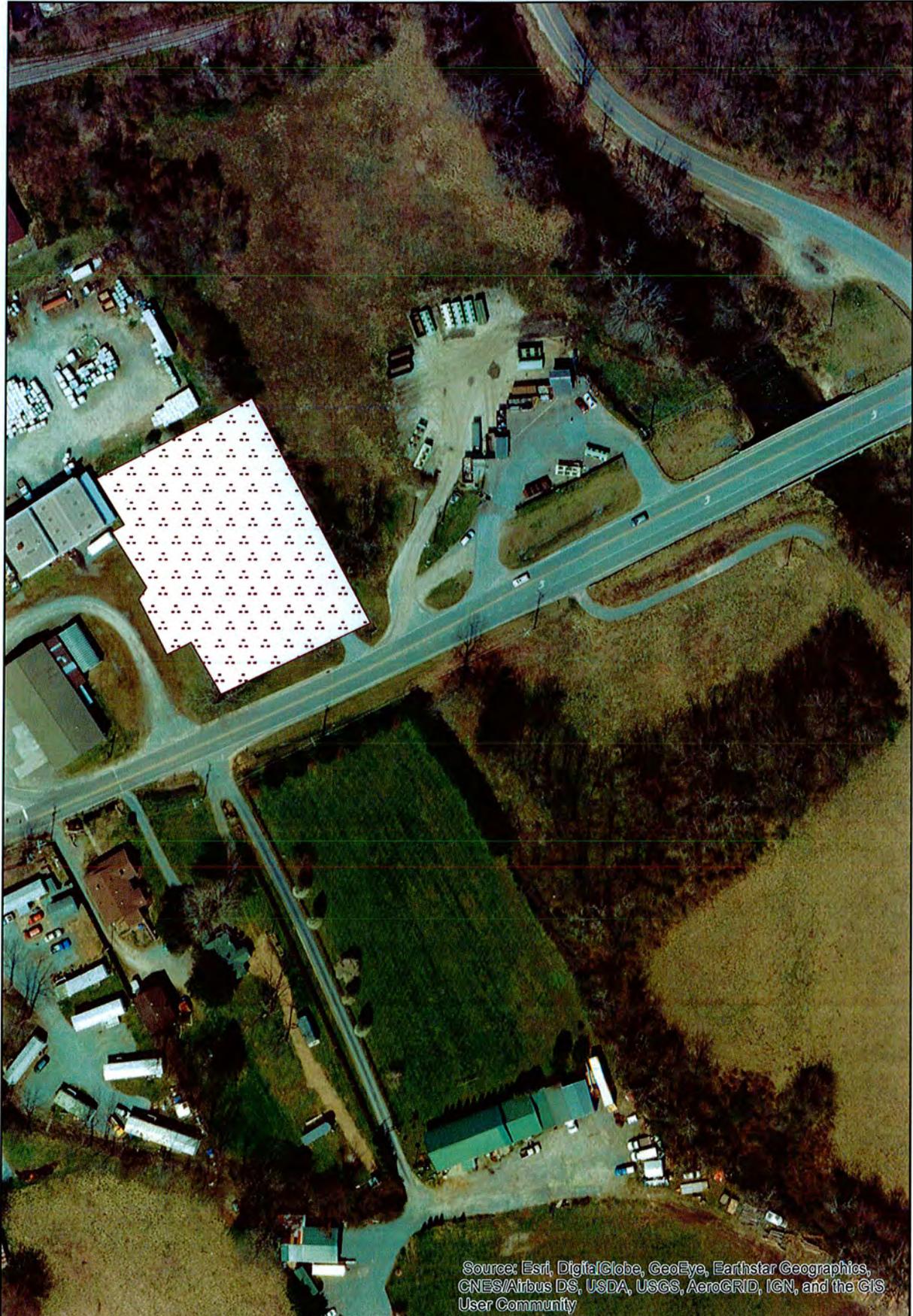


Figure 3. Aerial photograph showing location of shovel tests, newly identified archaeological sites, and previously recorded archaeological sites and historic structures in and adjacent to the Wilson Road APE (1 of 4).

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

ARC-GIS aerial shape file map illustrating the location and boundaries of the portion of the Elizur Patton House that should be avoided during construction. If any potential impacts or easements are to be used in the historic house designated area as depicted above, archaeological monitoring is recommended.

APPENDIX B  
Public Involvement

Connecting people, products, and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina.



<<OWNER\_NAME>> <<Owner\_2>>  
 OR CURRENT RESIDENT  
 <<ADDRESS\_1>>  
 <<CITY>>, <<STATE>>, <<ZIP\_CODE>>

Adam Dockery  
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The North Carolina Department of Transportation (NCDOT) is proposing improvements to Wilson Road (S.R. 1540) in Brevard, Transylvania County, State Transportation Improvement Program (STIP) Project R-5763. The project is approximately 3.7 miles from U.S. 276 north to Old U.S. 64/ Old Hendersonville Highway (S.R. 1504).

### Purpose and Need

The purpose of the project is to bring the roadway out of the 2 percent annual chance (50-year) floodplain of the French Broad River and address facility deficiencies throughout the corridor, bringing the road up to minimum design standards.

### Project History

In September 2016, NCDOT presented three options for potentially improving Wilson Road:

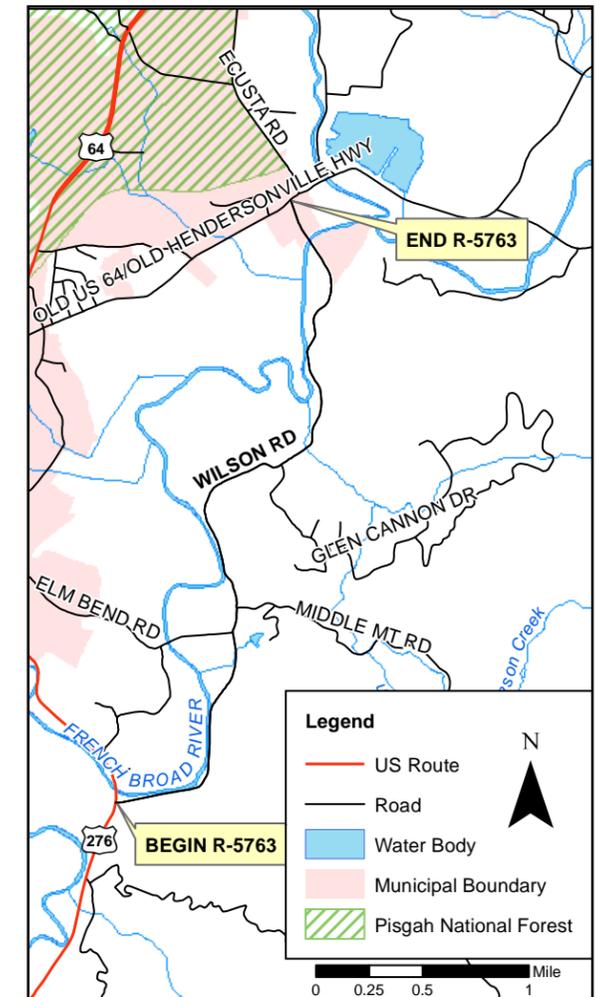
- Option 1 - minimal upgrade based on NCDOT's Resurfacing, Restoration, and Rehabilitation Guidelines.
- Option 2 - upgrade to "major collector" design standards.
- Option 3 - upgrade Wilson Road to U.S. Route design standards.

After public comment, NCDOT chose to move forward with Option 2, which addresses purpose and need while minimizing impacts.

### Project Schedule\*

Publish Final Document	Summer 2020
Begin Right of Way Acquisition	Fiscal Year 2020
Begin Construction	Fiscal Year 2022

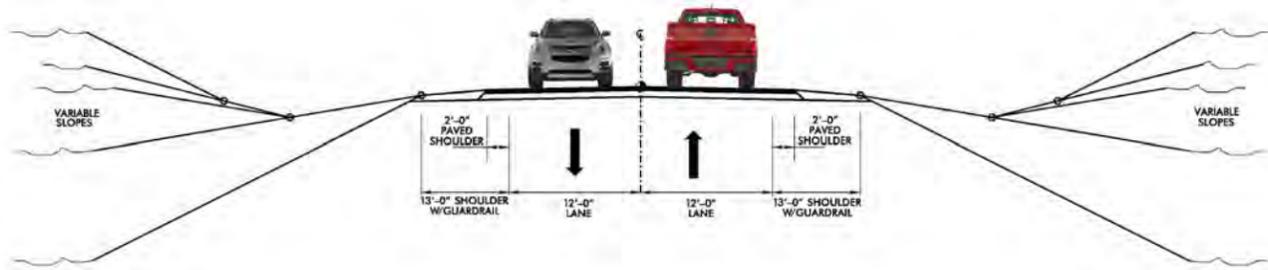
\*Schedule is tentative and subject to change.



## Project Overview

Since the public meeting, NCDOT has moved forward with environmental and design studies. NCDOT proposes to realign Wilson Road to directly intersect Ecusta Road on new location with a new bridge over the French Broad River (see green figure). NCDOT also proposes to replace the Williamson Creek bridge on new location (see pink figure). To correct vertical deficiencies and move Wilson Road out of the 50-year floodplain, the road will be raised in some locations (see blue figure).

The project will widen the existing road from two 9-foot travel lanes to two 12-foot travel lanes with 8-foot shoulders on each side (4 feet of each shoulder would be paved, with 4 feet of grass shoulder beyond the pavement). The proposed bridges will maintain the two 12-foot travel lanes with 8-foot shoulders.



## Potential Impacts

During its environmental studies, NCDOT determined that the project may affect a variety of resources including streams, wetlands, ponds, historic properties eligible for the National Register of Historic Places, threatened and endangered species, and an environmental justice community. Efforts to minimize impacts to these resources are on-going. The table shows the potential impacts to each resource based on construction limits plus an additional 25 feet.

Resource	Potential Impacts
Streams (linear feet)	3,190 feet
Wetlands (acres)	0.40 acre
Ponds (acres)	0.05 acre
Historic Properties (acres)	Pisgah Forest U.S. Post Office – No Impacts Glenn Cannon Country Club – No Impact Mary & Albert Jenkins House – 1.4 acres
Threatened and Endangered Species	Appalachian elktoe – Endangered Biological Conclusion – <i>Unresolved</i>
Environmental Justice Community	1 Manufactured Home Park
Potential Relocations	23 potential relocations

<sup>1</sup>Impacts to threatened or endangered species are subject to formal consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act. During this consultation USFWS will determine what type of impacts the project may have on the species and render a Biological Opinion.

## Preferred Option



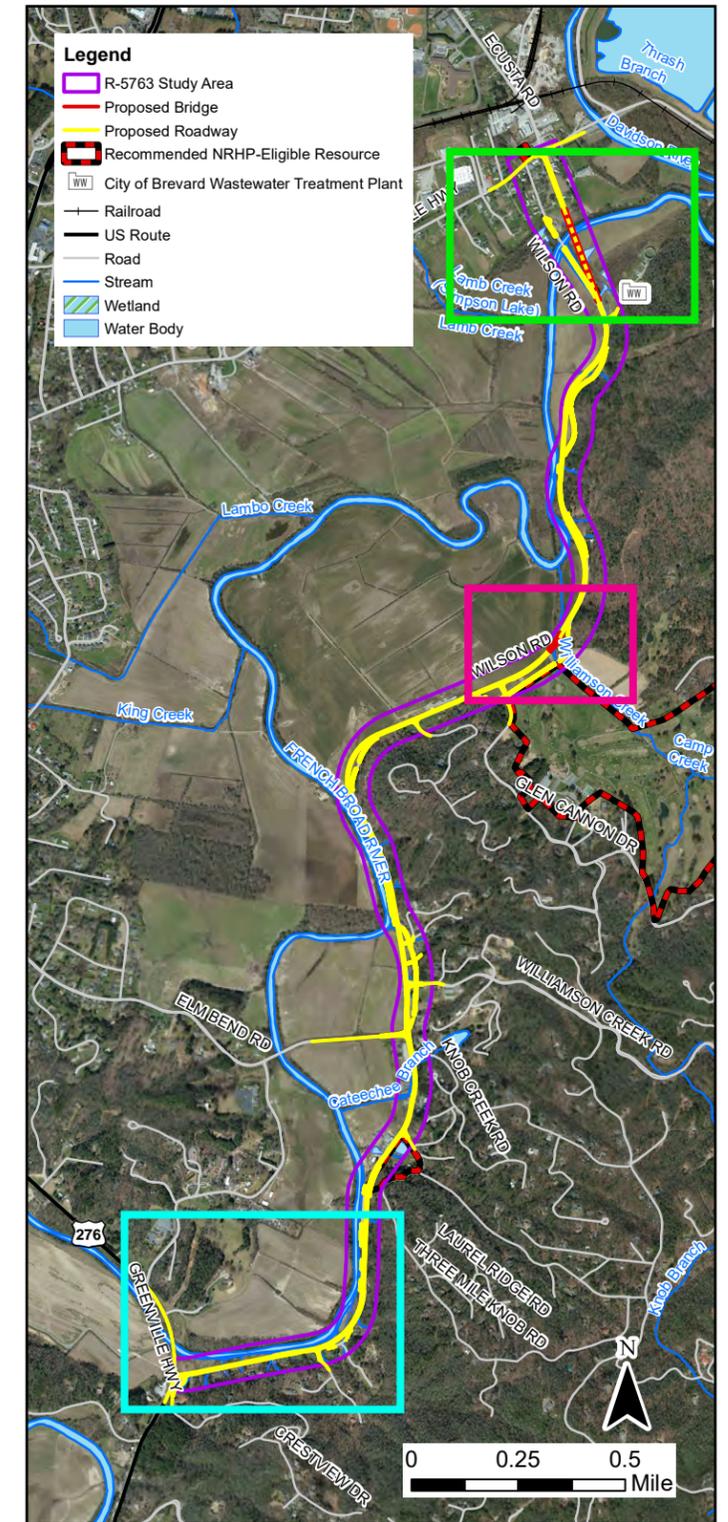
- Wilson Road will be re-aligned to intersect Ecusta Road, thus shifting the bridge onto new location.
- The existing bridge and the columns in the water will be removed once the new bridge is built.
- The portion of Wilson Road between the River and Old U.S. 64/Old Hendersonville Highway will be retained to provide access to homes, businesses, and the boat launch.



- The road alignment will shift to the west reducing the severity of the curves and bringing the road up to current design standards.



- The vertical profile of the beginning of Wilson Road will be raised to accommodate flooding. The height ranges from 4 to 20 feet.



Cost Estimate*	
Right of Way	\$270,000
Construction	\$34,500,000

\*Based on the 2020-2029 STIP